

A NEW USE FOR THE AERIAL RECONNAISSANCE MULTI-SENSOR (ARMS)
AIRCRAFT: HOW TO APPROPRIATELY USE THE ARMS AIRCRAFT
FOR HOMELAND SECURITY WITHOUT INFRINGEMENT ON
THE POSSE COMMITATUS ACT

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
Homeland Security

by

TRACY L. KENNEPP, MAJOR, U.S. ARMY
B.S., Northern Illinois University, DeKalb, Illinois, 1997

Fort Leavenworth, Kansas
2012-02

Approved for public release; distribution is unlimited.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 14-12-2012		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) FEB 2012 – DEC 2012	
4. TITLE AND SUBTITLE A New Use for the Aerial Reconnaissance Multi-Sensor (ARMS) Aircraft: How to Appropriately Use the ARMS Aircraft for Homeland Security without Infringement on the Posse Commitatus Act				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) MAJ Tracy L. Kennepp				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				8. PERFORMING ORG REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The Army Reserve Aerial Reconnaissance Multi-Sensor (ARMS) Aircraft are no longer required to provide overwatch in Iraq. With budgetary constraints, both the Department of Defense (DoD) and Department of Homeland Security (DHS) must employ fiscal responsibility by sharing assets. The ARMS aircraft can provide DHS similar overwatch capability as in Iraq, limiting the need for other more costly aerial assets and adding capacity. Additional mapping missions would increase operational reach for DHS. Such missions can be conducted without infringing on the Posse Commitatus Act by establishing proper control measures. Both DoD and DHS will benefit and show fiscal responsibility.					
15. SUBJECT TERMS ARMS, Posse Commitatus Act, Homeland Security,					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)
			(U)	67	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: Major Tracy L. Kennepp

Thesis Title: A New Use For The Aerial Reconnaissance Multi-Sensor (ARMS)
Aircraft: How To Appropriately Use The ARMS Aircraft For Homeland
Security Without Infringement On The Posse Commitatus Act

Approved by:

_____, Thesis Committee Chair
Gregory P. Bedrosian, MLS

_____, Member
Richard S. Faulkner, Ph.D.

_____, Member
Matthew T. Fuhrer, M.A.

Accepted this 14th day of December 2012 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

A NEW USE FOR THE AERIAL RECONNAISSANCE MULTI-SENSOR (ARMS) AIRCRAFT: HOW TO APPROPRIATELY USE THE ARMS AIRCRAFT FOR HOMELAND SECURITY WITHOUT INFRINGEMENT ON THE POSSE COMMITATUS ACT, by MAJ Tracy L. Kennepp, 67 pages.

The Army Reserve Aerial Reconnaissance Multi-Sensor (ARMS) Aircraft are no longer required to provide overwatch in Iraq. With budgetary constraints, both the Department of Defense (DoD) and Department of Homeland Security (DHS) must employ fiscal responsibility by sharing assets. The ARMS aircraft can provide DHS similar overwatch capability as in Iraq, limiting the need for other more costly aerial assets and adding capacity. Additional mapping missions would increase operational reach for DHS. Such missions can be conducted without infringing on the Posse Comitatus Act by establishing proper control measures. Both DoD and DHS will benefit and show fiscal responsibility.

ACKNOWLEDGMENTS

I would like to thank my husband Aaron Parkin for all of his love, support and encouragement this year. Without it I would not have been able to complete this thesis or this course. Thank you for being my best friend for over 14 years.

I would also like to thank my committee members, Mr. Bedrosian, Dr. Faulkner, Mr. Fuhrer and Mr. Wilson, for all of their assistance, encouragement and subject matter knowledge that has made this learning process enjoyable. I would not have completed this without their guidance to keep me on the correct glide path towards this final outcome.

TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE	iii
ABSTRACT.....	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS.....	vi
ACRONYMS.....	viii
TABLES	ix
CHAPTER 1 INTRODUCTION	1
Purpose.....	1
Issue	1
Problem	2
Assumptions.....	3
Definitions	3
Scope.....	4
Significance of the Study	4
Summary	4
CHAPTER 2 LITERATURE REVIEW	6
Introduction.....	6
DHS's History, Funding and Current Missions Needs.....	6
U.S. Army Reserve ARMS Aircraft Mission Capabilities and Training Requirements	9
Expanding the Current Role the DoD Plays in Homeland Security	10
The Posse Comitatus Act.....	12
The Cost Benefit to Both the DoD and the DHS	13
Conclusion	15
CHAPTER 3 RESEARCH METHODOLOGY	18
Introduction.....	18
Research Approach	18
CHAPTER 4 ANALYSIS	24

Introduction.....	24
DHS’s History, Funding and Current Missions Needs.....	24
The U.S. Army Reserve ARMS Aircraft Mission Capabilities and Training Requirements	28
The DoD’s Ability to Expand the Current Role DoD Plays in Homeland Security.....	33
The Posse Comitatus Act and Its Relevance on this Subject.....	34
The Cost Benefit to Both the DoD and the DHS	39
Conclusion	41
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS	45
Introduction.....	45
Conclusions.....	46
Recommendations.....	48
Recommendations for Further Study	50
Conclusion	51
BIBLIOGRAPHY	53
INITIAL DISTRIBUTION LIST	58

ACRONYMS

ARMS	Army Reserve Aerial Reconnaissance Multi-Sensor
ASO	Airborne Sensor Operators
BUR	Bottom-Up Review
DHS	Department of Homeland Security
DoD	Department of Defense
FAA	Federal Aviation Administration
OBM	Operation Big Miguel
UAV	Unmanned Aerial Aircraft or Vehicles

TABLES

	Page
Table 1. Exceptions to the Posse Comitatus Act	36

CHAPTER 1

INTRODUCTION

Purpose

The intent of this paper is to examine current Department of Homeland Security (DHS) requirements to meet the national threat environment while working within the current budget constraints, and the ability of the Army Reserve Aerial Reconnaissance Multi-Sensor (ARMS) Aircraft to assist with fulfilling those requirements. This paper will examine the capabilities of the ARMS aircraft as they apply to national security concerns and requirements. Additionally I will determine how the Army Reserves can meet their training needs while conducting a Homeland Security mission. Through analysis, this thesis will reveal the examination of pertinent regulations and the Constitutional applicability of utilizing the Title 10 soldiers on Homeland Security missions. This analysis will result in a recommendation to both the DHS and the Army Reserves on the best utilization of the ARMS aircraft for Homeland Security.

Issue

Since 2001 protection of the United States (U.S.) borders has been a growing concern to the DHS. The number of patrol agents along our borders has increased and the discussion of how to prevent terrorists from gaining access to our country is in the news on a monthly basis. Additionally, the scope of what the DHS is required to do has increased since its inception.¹ Homeland Security not only protects the U.S. from terrorists, but also patrols the borders to deter illegal immigration, and to monitor and prevent drug and weapons trafficking. This occurs on both the northern and southern

borders. This research will be important to Homeland Security's ability to effectively fight the homeland war on terror in a more efficient and economical manner by utilizing the ARMS aircraft as an asset to help reduce the strain on both border patrol agents and the DHS.

Problem

In reaction to the terrorist attacks on 11 September 2001, the U.S. went to war in both Afghanistan and in Iraq. Insurgent activities changed the Army's tactics. Specifically the use of improvised explosive devices (IEDs) became a huge obstacle to maintaining peace and stability in Iraq. For this thesis, I will focus on lessons learned from Iraq. In 2006,² Task Force ODIN was stood up to counter the insurgency's use of IEDs. The name ODIN has dual meaning. It is an acronym for Observe, Detect, Identify and Neutralize.³ The task force is comprised of manned and unmanned aerial reconnaissance platforms including the ARMS aircraft and intelligence analysts.

Due to the increase in roadside IEDs throughout Iraq in 2005 and 2006, General Richard A. Cody directed a unit be created as quickly as possible to provide aerial surveillance over the main service routes. Beginning in 2006, the U.S. Army Reserve modified ten commercial, off the shelf C-12 Beachcraft 200 King Air airplanes that were already in their inventory into intelligence, reconnaissance and surveillance (ISR) platforms called the ARMS aircraft. From 2006 until the withdrawal of all U.S. troops in December 2011, these aircraft performed thousands of missions in many different roles in Iraq. Since the withdrawal in Iraq, this platform is no longer being utilized in its ISR capacity and cannot be converted back to a transport aircraft due to the extent of the

structural modifications that were made to the airframe. The Army Reserve needs to find a cost effective way to continue to keep pilots and intelligence analysts trained.

Assumptions

Three assumptions made while researching and making a recommendation for this thesis. The first assumption is that the Army Reserve is going to maintain the ARMS aircraft and doctrine that has been used to train personnel for the last five years. A second assumption is that the ARMS aircraft will not be deployed overseas and will be available for this mission. This is based on the current deployment projections and the fact that in 2008 an exact replica unit was stood up in Afghanistan with the National Guard. The Guard provided aircraft and crews to perform the same mission that the U.S. Army Reserve was performing in Iraq. Lastly, another critical assumption is that the Army Reserves can manage the reserve soldier's calendar in order to cover a schedule necessary to meet Homeland Securities needs.

Definitions

Aircrew Training Manual: The training circular which explains the flight training requirements for pilots (rated crewmembers).

Army Reserve: The Title 10 force of the U.S. Army Reserve. This does not include the National Guard or National Guard soldiers on Title 10 orders.

Posse Comitatus: The federal act that limits the use of Title 10 troops in law enforcement within the U.S. unless directed by the President in cases of local governments' inability to act due to overwhelming circumstances, i.e. natural disasters.

Scope

The research on this topic will be limited to the unclassified uses of the ARMS aircraft or equipment. This research will also address the use of these aircraft by the Army Reserve under Title 10 while not infringing on the Constitution. It will examine how the Posse Comitatus Act influences the use of the aircraft and what steps must be taken by the government to keep ARMS surveillance within constitutional boundaries. The research will also analyze the benefits and the cost effectiveness to the Army Reserve.

Significance of the Study

Since the financial downturn in 2008, the U.S. government has been looking for ways to decrease the annual budget. As the U.S. pulled troops out of Iraq in 2011, the military's budget was reduced to match the downturn in the needs of a deployed Army. In 2012, the first budgetary cuts for the military in 10 years were announced.⁴ This has led to repercussions for both the DHS and the Army Reserve. If the ARMS aircraft can assist Homeland Security while training pilots and aerial intelligence analysts, budgetary constraints will become less of a concern. This ability will maximize budget dollars while enhancing capabilities for both organizations.

Summary

This thesis is divided into five chapters. Chapter 2 is the literature review of the topics researched. The review will begin with the role of Homeland Security, its current needs, and its current and future financial situation. Additionally, I will look at the capabilities and training requirements for the ARMS aircraft. Chapter 3 will summarize

the research methodology utilized in this thesis. Chapter 4 will be an analysis of research and an explanation of how this pertains to my research problem. Chapter 5 provides recommendations on how to employ the ARMS aircraft within the Homeland Security scope. Chapter 5 describes how the Army Reserves can train on tactical tasks necessary to maintain critical mission skills.

¹Christopher Bellavita, "Changing Homeland Security: What is Homeland Security? *Homeland Security Affairs* 4, article 1 (June 2008), www.hsaj.org (accessed 5 November 2012).

²Donna Miles, "Task Force Targets Human Networks Behind IEDs," *American Forces Press Service*, 11 March 2011, <http://www.army.mil/article/53114> (accessed 5 November 2012).

³Ibid.

⁴Elisabeth Bumiller and Thom Shanker, "Defense Budget Cuts Would Limit Raises and Close Bases," *New York Times*, 26 January 2012.

CHAPTER 2

LITERATURE REVIEW

Introduction

The topic of this thesis specifically addresses the current assistance the U.S. military gives to the DHS and the agencies, which report to DHS. To completely appreciate the scope of what can be done, one must look at the historical references of how and why the support is currently being provided. The Department of Defense (DoD) refers to the protection provided the U.S. as homeland defense, as opposed to the media that refers to it as homeland security. Throughout this thesis, both terms will be used interchangeably to refer to the services DHS provides to American citizens.

This review breaks the research into five areas: (1) the DHS's history, funding and current mission needs, (2) the U.S. Army Reserve ARMS aircraft mission capabilities and training requirements, (3) the DoD's ability to expand the current role that the DoD plays in homeland security, (4) the relevance of Posse Comitatus Act on this subject, and (5) the cost benefit to both the DoD and the DHS.

DHS's History, Funding and Current Missions Needs

One must understand the DHS needs in order to determine what the ARMS aircraft can do for them. As the department has evolved, so has the role it oversees. The DHS's missions have grown to include border security, supervision of drug trafficking and the deterrence of terrorist activities. As the department has grown, the need to effectively manage their limited resources has become critical. Funding is one of the department's most limited resources. Three articles that have been written on how the

DHS utilizes its funding have been critical of the lack of oversight. Two of the articles are Congressional reports written by Shawn Reese and the third article is John Mueller's and Mark G. Stewart's "Balancing the Risks, Benefits, and Costs of Homeland Security." John Mueller and Mark G. Stewart bring to light that in 2004 the Government Accountability Office (GAO) mandated that DHS complete a cost benefit analysis of its programs, which DHS still has not completed. In the last 10 years the increase in spending on homeland security exceeds \$1 trillion with no accountability of specifically where the money has gone.¹

Initially, after the 11 September 2001 attacks, no government agency nor the American public questioned Homeland Security funding and where that money was utilized. Federal homeland security spending made up 0.1 percent of the U.S. gross domestic product from 1996 to 2001, but increased to 0.35 percent in 2002.² In the last decade, DHS funding has slowed in comparison with initial funding after the 11 September 2001 attacks, but the demand for increased regulation and oversight has increased. With the current economic downturns and fiscal difficulties, the department must find ways to continue to protect the country under this government and media scrutiny. Congress, the GOA and the media have repeatedly requested that DHS account for their spending, but the requests have not been complied with.

This should hardly come as a surprise, but a new paper that analyzes money being spent on Homeland Security finds that it's incredibly wasteful (found via Julian Sanchez). You can read the full report by John Mueller and Mark G. Stewart, which probably confirms what most people were already thinking. Basically, Homeland Security has ratcheted up spending at a massive rate, and there's little to no effort to judge that spending against the actual risk reduction. That is, there's simply no one doing any sort of real cost-benefit analysis on this spending.³

One way DHS can show compliance is through a cost benefit analysis, which they began in 2009 with the *Bottom-Up Review (BUR)*.⁴ The *BUR* revealed that a cost benefit analysis can easily be provided if DHS worked with other government agencies to expand the role of joint operations and intelligence operations.⁵ One such program that must also be considered when examining budgetary concerns is the cost to develop and maintain surveillance equipment, techniques, strategies and aerial platforms. The DoD must develop the ISR program's long-term strategy now that a majority of its assets are back from deployment. DHS is also developing a cost effective aerial surveillance program. This cost could be shared with the DHS by creating a mutually beneficial program for the ARMS aircraft.

Articles referencing the current use of unmanned aerial aircraft or vehicles (UAV), specifically along the border, include a 2010 Congressional report that outlines mandates for DHS's use of UAV and the benefits and limitations of UAVs along the border. A second article is a 2005 Congressional report and a Congressional research report that both conclude the cost to benefit ratio does not meet the current requirements of today's economy for the use of UAVs within national airspace. Though the cost of procuring a UAV is less than the cost of a manned aerial platform, the maintenance, training costs exceed that of the manned versions. A more pressing concern is the safety of using UAVs within the national airspace.⁶ The general consensus from all these articles is that taxpayers are unwilling to invest in the high price of unmanned aerial aircraft for border security without further engineering development on the UAVs and agreements on exactly how UAVs will be employed without infringing on personal freedoms.

U.S. Army Reserve ARMS Aircraft Mission Capabilities and Training Requirements

The ARMS aircraft can perform multiple missions with the different reconnaissance equipment onboard the aircraft.⁷ Missions the aircraft performed while in Iraq can either be exercised as current doctrine dictates or they can be modified to meet Homeland Security's requirements. The current Aircrew Training Manual (ATM) for the ARMS aircraft has not been vetted or approved by the Department of the Army (DOA). Currently the ATM is written as a unit standard operating procedure manual. The ATM was developed in Iraq by the standardization department at the company and battalion level in conjunction with Sierra Nevada Corporation. There is a standardization department in every company and battalion within Army Aviation. The department's job is to ensure pilot's maneuvers performed in the aircraft are executed identically during every mission and that pilot's techniques are within the standard. The standardization department also interprets any questions written within the Army regulations and Federal Aviation Administration's (FAA) regulations as well as performs all flight examinations within the unit.

The ATM developed in Iraq will have to be approved by the DOA prior to the mission tasks being conducted. With nothing else to reference, the ATM is the doctrine the U.S. Army Reserve is using for the ARMS aircraft missions sets, training and proficiency requirements. This thesis will use the ATM, which is written as a Standard Operating Procedure (SOP) as the basis for the types of missions the ARMS aircraft can perform, and the training requirements to maintain proficiency in each task.⁸ The SOP is separated into four main sections; the mission types, training requirements for pilots, training requirements for intelligence analysts and the requirements for both in order to

remain current in each task. Pilots also must maintain basic pilot proficiency as stated in Army Regulation 95-1, *Army Flight Regulations* and Training Circular 1-218, *Aircrew Training Manual, Utility Airplane C-12*. The ATM specifies the training requirements for pilots and airborne sensor operators (ASOs) as well as the currency requirements. All of these requirements are both time and task specific.⁹

Possible missions for the ARMS aircraft include border security, search and rescue, drug enforcement operations or mapping. Currently Border Patrol is conducting missions called Operation Big Miguel (OBM) utilizing manned aerial surveillance with aircraft and equipment similar to that of the ARMS aircraft. It is an overwatch mission using payload and operators similar to the overwatch mission Task Force (TF) ODIN conducted.¹⁰ The ARMS aircraft could support OBM as well as other mission sets to support border surveillance.

Due to the success of Big Miguel, the PdM ODI (Product Manager for Observe, Detect and Identify) office has been asked to continue support of the border mission with additional capabilities to those that were used during the initial mission. New to the mission will be the ability to conduct intelligence processing exploitation and dissemination, or PED, to gain additional value from the information captured by the Caravans sensors.¹¹

Expanding the Current Role the DoD Plays in Homeland Security

Research uncovered three articles on the use of the ARMS aircraft, but each only discussed the ARMS mission in Iraq and Afghanistan. No articles were found on the use of ARMS aircraft domestically. Brandon Pollachek's article "Northern Command Helps Border Patrol with Southwest Mission" explains OBM is a Joint Task Force-North (JTF-N) mission starting in the beginning of 2012. This relatively new mission utilizes the technology as well as the expertise of the U.S. Army Reserve operators to assist with monitoring the southwest border. Operational Big Miguel does not use the ARMS

aircraft, but similar technology in a different airframe. Instead of procuring and training new operators on surveillance systems, DHS should employ operators who are already trained in border patrol missions. “A major benefit to the JTF-N mission came from utilizing operators on Big Miguel aircraft who were veterans of Task Force ODIN, which allowed them to leverage their experiences from operating the same payloads in Afghanistan and Iraq while flying border missions.”¹²

By expanding the roles that the Army Reserves and DoD play in border security, DHS can better justify funding, the cost benefit of utilizing existing equipment and outside agencies. The U.S. Army Reserve will get the benefit of trained pilots and intelligence analysts while sharing the cost of the aircraft, maintenance and fuel. Pilots and analysts receive an added value by executing a mission for which they have trained. A real world mission gives an operator better training that requires the speed, technique and skill required to perform their military mission. Real world mission training is better because the operator must conduct the mission with the same pressures and requirements they would need when they are deployed. Without the benefit of real world missions, operators may cut corners in training scenarios, slow down execution time and put forth less than full effort that would be needed in combat. Additionally, by adding to the mission types, Reserve pilots and analysts can expand not only their training on additional techniques but also provide better utilization of the already purchased equipment. Some additional mission types that could be beneficial to DHS, Border Patrol and the Army Reserves include mapping and forensic backtracking. If this program is initiated, in the future additional roles could be added which will give additional benefit to all three agencies.

The Posse Comitatus Act

The Posse Comitatus Act limits the military's ability to enforce or maintain law within the U.S. Army FM 3-28, *Civil Support Operations* explains the Posse Comitatus Act has evolved from narrowly focused to the current act that broadens the military's capabilities to enforce or maintain law within the U.S.¹³ "The original statute was limited, intended primarily to confine such law-enforcement powers to the president rather than letting federal marshals and county sheriffs decide when to call in troops. Subsequent federal court decisions have prohibited federal troops from performing searches, conducting surveillance, detaining suspects, and making arrests."¹⁴ Craig Trebilcock's article "Resurrecting Posse Comitatus in the Post-9/11 World" explains the confusion over the Posse Comitatus Act from soldiers of all ranks to Congress. If the ARMS aircraft were utilized to perform a border patrol mission or any mission under DHS, the Army Reserve must clarify their role under Posse Comitatus to ensure they do not break the law.

Part of the challenge in establishing policies and force structures for homeland security is that two fundamentally different missions can arise out of one domestic security situation-the humanitarian response mission and the law-enforcement security mission. As such, the fundamental question for current domestic security planners is, "How does the United States employ one force package that can perform both domestic missions, if necessary?" This is an extension of the perennial challenge to military commanders who, while recognizing that soldiers and marines are not civilian policemen, are often called upon by politicians to perform law-enforcement roles domestically and abroad.¹⁵

The U.S. Army Reserve must understand the limitations of the law as it reads today and how it directly applies to them. Sections 371 through 374 of the DoD Authorization Act of 1982 defines the type of support that DoD can provide law enforcement.¹⁶ It specifically authorizes the use of military equipment and facilities, and

the training and advising of civilian law enforcement officials. Under these sections, the use of ARMS aircraft to support DHS is allowed. However the U.S. Army Reserve must understand how regulations limit their ability to employ law enforcement. Thomas Lujan's article "Legal Aspects of Domestic Employment of the Army" discussed the use of DoD assets, which typically is support to civil authorities in the case of disaster relief operations. But the use of DoD assets can be utilized in civilian law enforcement within specific constraints.¹⁷ The Robert T. Stafford Disaster Relief and Emergency Assistance Act, commonly called the Stafford Act and the Insurrection Act also provide guidance on how and when the ARMS aircraft and crews could be utilized by DHS. The U.S. Army Reserve can then tailor mission sets to support Homeland Security needs depending on the situation and still be in compliance with the above-mentioned acts. Examples of how the Army Reserves could tailor mission sets is which side of the border the analysts in the back look at or who interprets the data received from monitoring the border. This will be further explained and examined in chapters 4 and 5. Under both acts the use of the ARMS aircraft the Army Reserves will be playing a support role to DHS. Down to the lowest level, Title 10 soldiers must be trained on the limitations of support in order to comply with the Insurrection and Stafford Acts as well as understanding how to work with agencies within DHS.

The Cost Benefit to Both the DoD and the DHS

John P. Roth's "Fiscal Year 2012 Department of Defense Fixed Wing and Helicopter Reimbursement Rates" breaks down the operating costs of an Army C-12 airplane and an RC-12 airplane.¹⁸ The analysis does not specify the cost of the ARMS airframes. There is no documentation on the current cost of training Reserve pilots or

aerial intelligence analysts. To determine the cost benefit to both agencies, one must look at what costs have already been incurred by the U.S. Army Reserve and determine if those costs can be shared with the DHS. The U.S. Army Reserve is contracted to fly a specific number of hours per month on each aircraft. The money is already allocated annually ahead of time for these hours. The DHS is already spending large portions of its budget on aerial surveillance. Instead of contracting with an outside agency, that expense could go to the U.S. Army Reserves. Overall the budget would not be lowered, but funding would be used with better fiscal responsibility. As the U.S. Army Reserve expands its mission sets along the border, the overall cost to the government will go down. Chad Haddal and Jeremiah Gertler's Congressional Research Report "Homeland Security: Unmanned Aerial Vehicles and Border Surveillance" stated the cost of maintaining a manned aerial surveillance aircraft is currently cheaper than a UAV. Since the ARMS aircraft have already been purchased the initial cost is also cheaper than buying new UAVs. "According to the CBP Inspector General, the costs of operating a UAV are more than double the costs of operating a manned aircraft. This is because UAVs require a significant amount of logistical support and specialized operator and maintenance training."¹⁹ The DHS could utilize the ARMS aircraft in exchange for the UAVs and better use the funding in other areas. This will show better fiscal responsibility and a cost benefit DHS needs. The DoD does have UAVs that can also perform this mission, but the DoD will use them in other roles throughout the world where deploying manned assets is not feasible due to security or international agreements.

Additionally the safety concerns and privacy concerns of the current use of UAVs within U.S. borders would be decreased. Thomas Lujan's article "Legal Aspects of

Domestic Employment of the Army” explained the concerns that U.S. citizens have with the perception that UAVs are less accountable for breaking privacy laws than manned aircraft.²¹ It goes on to describe that U.S. citizens feel if a surveillance aircraft is manned, someone will be held responsible. This is not a financial cost, but public support is an added cost to the DHS’s image. Currently the FAA is concerned about the use of UAVs within the national airspace due to the fact their accident rate is much higher than manned aircraft.

Conclusion

The vast majority of literature advocates for better use of homeland security funds while continuing to protect the U.S. and its’ borders. There is very little input into how the DHS should make these changes or even how much change needs to take place. There is little discussion about how the military can improve support to law enforcement agencies, even with what DoD is currently providing.

This thesis will focus on the support the U.S. Army Reserve currently provides the DHS with aerial surveillance and how much more the U.S. Army Reserve can do. The conclusion will provide a recommendation on ways to improve the support and how this support will benefit the U.S. Army Reserve. The analysis of this topic will show the limited discussion on the ARMS aircraft capabilities and the ARMS aircraft’s benefits outside of DoD missions. As the aircraft returned in December 2011 from their Central Command (CENTCOM) mission, the variety of and flexibility of the aircraft and its equipment have not been fully developed. DHS can benefit greatly by utilizing the capabilities of the ARMS aircraft in support of National Security.

¹John Mueller and G. Stewart, "Balancing the Risks, Benefits, and Costs of Homeland Security," *Homeland Security Affairs* 7, article 16 (August 2011), <http://www.hsaj.org/?article=7.1.16> (accessed 21 November 2012).

²Bart Hobijn and Erick Sager, "What Has Homeland Security Cost? An Assessment: 2001-2005," *Current Issues in Economics and Finance* 13, no. 2 (February 2007), http://www.newyorkfed.org/research/current_issues/ci13-2.pdf (accessed 10 August 2012).

³Mike Masnick, "Homeland Security Doesn't Do Cost/Benefit Analysis; They Just Do Fear And Bluster," *Techdirt*, 10 May 2011, <http://www.techdirt.com/articles/20110429/23582414094/homeland-security-doesnt-do-costbenefit-analysis-they-just-do-fear-bluster.shtml> (accessed 15 May 2012).

⁴U.S. Department of Homeland Security, *Bottom-Up Review Report (BUR)* (Washington, DC: U.S. Department of Homeland Security, July 2010), vii.

⁵*Ibid.*

⁶Miles.

⁷Brandon Pollachek, "Northern Command Helps Border Patrol with Southwest Mission," *M2 Presswire*, Coventry, 31 January 2012, <http://lumen-.cgscarl-.com/login-?url=http://proquest-.umi-.com-.lumen-.cgscarl-.com/pqdweb-?did=2574243271-&Fmt=2-&clientId=5094-&RQT=309-&VName=PQD> (accessed 21 November 2012).

⁸Michael F. Buford, Major, "Non-rated Aircrew Training Manual, Aerial Reconnaissance Mutli-Sensor (ARMS) C-12R1," n.d.

⁹Headquarters, Department of the Army, TC 1-218, *Aircrew Training Manual, Utility Airplane, C-12* (Washington, DC: Government Printing Office, September 2005).

¹⁰Pollachek.

¹¹*Ibid.*

¹²*Ibid.*

¹³Headquarters, Department of the Army, FM 3-28, *Civil Support Operations* (Washington, DC: Government Printing Office, 20 August 2010), 5-2.

¹⁴Art Pine, "Should Congress Scrap Posse Comitatus," *United States Naval Institute Proceedings* 131, no. 12 (December 2005): 46.

¹⁵Craig Trebilcock, "Resurrecting Posse Comitatus in the Post-9/11 World," *Army* (1 May 2009): 21-24.

¹⁶Matt Matthews, *The Posse Comitatus Act and the United States Army: A Historical Perspective* (Ft. Leavenworth, KS: Combat Studies Institute Press, 2006), 43.

¹⁷Thomas R. Lujan, "Legal Aspects of Domestic Employment of the Army," *Parameters* 27, no. 3 (Autumn 1997): 82-98.

¹⁸John P. Roth, *Fiscal Year 2012 Department of Defense Fixed Wing and Helicopter Reimbursement Rates* (Washington, DC: Congressional Research Service October 2001), 1.

¹⁹Chad Haddal and Jeremiah Gertler, "Homeland Security: Unmanned Aerial Vehicles and Border Surveillance," Congressional Research Service Report for Congress, 2010, <http://www.fas.org/sgp/crs/homesec/RS21698.pdf> (accessed 21 November 2012), 4.

²⁰Lujan.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

This chapter will explain how the thesis research was conducted in order to reach a conclusion and recommendation on the benefit to both the U.S. Army Reserve and the DHS of using the ARMS aircraft for border security. The goal is to develop an essential task list based upon the study of current requirements of both the DHS and the U.S. Army Reserve. The analysis will enable economical use of the ARMS aircraft to include the training necessary.

Research Approach

The research methodology used in this thesis will be document review. The review will provide the opportunity to examine the homeland security mission requirements, challenges under the current budget constraints, and what the Army Reserve is authorized to do in accordance with the Posse Comitatus Act. To understand the benefits to both the Army Reserve and homeland security, one must look at the types of missions the ARMS aircraft can perform and their applicability to homeland security. Research will include current congressional guidance to the DHS on use of aerial assets to reduce ground requirements, and the annual requirements to train and maintain proficiency of aviators and aerial intelligence analysts within the Army Reserve.

The DHS has evolved over the past decade and requires more manpower. Budget constraints as well as FAA mandates have created capability gaps. This research will

counter the concern of critics on the manner in which the DHS spends its budget by showing the value of working with other agencies. One such article states:

In seeking to evaluate the effectiveness of the massive increases in homeland security expenditures since the terrorist attacks on the United States of September 11, 2001, the common and urgent query has been “are we safer?” This, however, is the wrong question. Of course we are “safer”— the posting of a single security guard at one building’s entrance enhances safety, however microscopically. The correct question is “are the gains in security worth the funds expended?”¹

The comparison of all these requirements will determine the applicability of the Army Reserves and DHS working together in order to reduce costs to both organizations while decreasing capability gaps.

Document review was chosen as the research methodology for this thesis because pertinent information exists concerning the need for aerial reconnaissance as well as the inability to meet that particular need. The review gives comprehensive and historical information while providing useful background in developing a solution for the problem. There are advantages and disadvantages to using document review which will be discussed later in this chapter.

Step-by-Step

The first step in this methodology is to examine the needs of homeland security in today’s threat environment. This thesis will review border security, drug trafficking, weapons trafficking, and the surveillance needs of each. This study focuses on internal threats within the U.S. The research analyzes current budgetary constraints of the DHS, and congressional requirements that are not being met.

The second step will determine the types of missions the ARMS aircraft can perform. This step will examine the aircraft equipment and techniques used to employ

such equipment. Each piece of equipment can be utilized in multiple ways. Equipment that may have been designed for one purpose could potentially fulfill other requirements. The more missions the aircraft can perform, the more applicable these aircraft and crews are to the DHS.

The third step will determine the training requirements of the Army Reserve. The aircrew-training manual and aerial intelligence analyst-training manual give specific semi-annual tasks, iterations, and necessary task frequency for both the aviators and aerial intelligence analyst proficiency. Once the requirements are determined, the research will examine how they can best be met and the cost associated with the requirements. Additionally, the research will explore the optimal time that should be spent on recurrent or proficiency training in order to keep a pilot or intelligence analyst current on basic missions. Recurrent training refers to the training required when an aviator or intelligence analyst goes outside of the regulated time period to remain current at their job. It requires additional training to refresh them on the basic skills. Both lose currency every sixty days.

The fourth step will explore the use of the Army Reserve soldiers within U.S. borders. The focus will be on Title 10 soldiers' responsibilities and capabilities as well as limitations within the Posse Comitatus Act and other federal acts. In particular, which missions the ARMS aircraft can perform in accordance with the Posse Comitatus Act and the aircraft's relevance in the future will be explored. The Department of Defense Authorization Act of 1982 further specifies the limitation on Title 10 forces working within the U.S.² Research has shown that leaders within the Army Reserves will have to

work with DHS to put in place control measures to ensure the mission is conducted without breaking any federal laws.

The legalities affecting the use of federal troops in such situations are complex and go well beyond Posse Comitatus. The original statute was limited, intended primarily to confine such law-enforcement powers to the president rather than letting federal marshals and county sheriffs decide when to call in troops. Subsequent federal court decisions have prohibited federal troops from performing searches, conducting surveillance, detaining suspects, and making arrests. (Even so, the Army may provide disaster relief assistance and advice, the courts have said.).³

The final step in this methodology will be to compare all of the research and develop a recommendation for use of the ARMS aircraft for homeland security. The recommendation will include the scope and limitations with which the ARMS aircraft can be utilized.

Strengths and Weaknesses

The advantage to this research methodology is the Army Reserve perspective under Title 10 U.S. Code has not been explored when compared to the Active Duty force under Title 10 U.S. Code, or the National Guard under Title 32 U.S. Code. The document review has revealed literature that contributes to answering the main thesis question. Most articles do not differentiate between the uses of Army Reserve soldiers under Title 10 U.S. Code while performing missions for DHS, versus Active Duty soldiers. This disadvantage will be overcome by presenting a thorough explanation of the various duty status responsibilities and how Soldiers can be utilized within each status.

Throughout the research conducted, there are ample articles and literature on the needs of the DHS, budgetary issues within the department, and the Posse Comitatus Act. This existing literature answers two of the four questions within the range of this thesis. These articles provide a broader scope of ARMS aircraft capabilities that can fulfill DHS

needs. Even though information on the training requirements for the ARMS aircraft is limited, there is enough specificity that is applicable for this thesis.

The disadvantage of using this methodology is that the topic of using aerial surveillance for homeland security has been thoroughly researched in the last few years. The research has addressed the need for unmanned aerial surveillance, which is currently restricted from use within the continental U.S. by the FAA. Most materials have also reviewed the requirement for aerial surveillance within the DHS. Another disadvantage is the lack of published information on the ARMS aircraft capabilities (which is mostly classified), the cost of training and maintaining currency within specific tasks, and the depth of the programs the ARMS aircraft currently perform. If the recommendation at the conclusion of this thesis is to utilize the ARMS aircraft for DHS, further research will need to be conducted in order to completely understand what the ARMS aircraft are capable of and how they can be utilized within the DHS. Interviews with the Army Reserve training divisions, unit training officers, non-commissioned officers (NCOs), and equipment experts on the ARMS aircraft as well as a literature review of classified materials would be necessary.

Conclusion

This chapter has discussed the research methodology conducted for this thesis. Each question within the thesis was examined using a historical document review. Secondary questions which will assist in developing a plan for the future were also researched. The research was conducted using a four-step process. More information was available on two of the four secondary questions. This is both a strength to this research methodology and a weakness because it provides multiple points of view revealing areas

where more information is needed. More extrapolation of information will be necessary for those topics on which fewer historical documents were available.

The next chapter will explore this research and interpret the facts that have been developed involving the secondary questions. The analysis will reveal the current congressional requirements for the use of aerial surveillance within the DHS, current needs for better budgetary practices within the department, different mission sets for the ARMS aircraft, training requirements for the ARMs crew members, and the roles the ARMS aircraft can fill within Posse Comitatus. The analysis will also discuss some of the difficulties that impacted the research on this topic.

¹Mueller and Stewart.

²Matthews, 43.

³Pine, 46.

CHAPTER 4

ANALYSIS

Introduction

This chapter will analyze the information on the five areas discussed in chapter 2. The five areas are: (1) the DHS's history, funding and current mission needs, (2) the U.S. Army Reserve ARMS aircraft mission capabilities and training requirements, (3) the DoD's ability to expand the current role that the DoD plays in homeland security, (4) the Posse Comitatus Act and its relevance on this subject, and (5) the cost benefit to both the DoD and the DHS. These areas will provide background for my recommendation on whether the ARMS aircraft can support DHS and how best to utilize this equipment.

DHS's History, Funding and Current Missions Needs

DHS was established 11 days after the attacks on 11 September 2001. The establishment of DHS was in response to the need for a unified department to oversee all aspects of homeland security. DHS became an official cabinet level position when Public Law 107-296 was passed on 25 November 2002.¹ DHS began with four main divisions and has grown to have five missions within its framework. Mission two pertains to this thesis. It is:

Mission 2: Securing and Managing Our Borders

Goal 2.1: Effectively Control U.S. Air, Land, and Sea Borders

Goal 2.2: Safeguard Lawful Trade and Travel

Goal 2.3: Disrupt and Dismantle Transnational Criminal Organizations²

DHS includes U.S. Customs and Border Protection; U.S. Citizenship and Immigrations Services; Federal Emergency Management Agency; U.S. Immigration and Customs Enforcement; U.S. Coast Guard; U.S. Secret Service and Transportation Security Administration.³ These agencies work together to ensure the overall DHS mission of protecting the American population is met. The *2010 National Security Strategy* states that homeland security is “a seamless coordination among federal, state, and local governments to prevent, protect against, and respond to threats and natural disasters.”⁴ Since DHS was formed and restructuring occurred, these agencies have developed interagency interoperability in order to meet this requirement. This has occurred slowly since DHS was formed and must continue to evolve to adapt to the changing security environment.

Over the first 10 years of DHS, the budget has increased by 360 billion dollars.⁵ One of the major concerns from members of Congress and taxpayers is how this funding is being spent. It is difficult to argue against the need for DHS, but with so many different agencies working for one over-arching agency, it is difficult to accurately track costs. In 2009, Secretary Janet Napolitano initiated an agency wide spending review. Additionally a 2012 Congressional report reasons that Congress and policy makers need to set DHS’s budget based on homeland security priorities, which is not the way the budget is currently being developed.⁶

The result of the 2009 agency wide spending review was the *BUR* published in July 2010. The *BUR* details “how well current activities and departmental organization align with mission priorities” and “identifies areas for enhanced mission performance.”⁷ One of the findings was to expand the role of joint operations and intelligence

operations.⁸ Expanding the role of joint operations will better utilize existing government assets while enabling DHS to improve budget expenditures. DHS plans to build on current successful models within the counter-narcotics infrastructure while “establishing cross-domain operational threat analysis and response protocols”.⁹ This means information must be shared in order to have a better operational picture. With a better operational picture agency wide, threats will be analyzed in multiple departments and an incident that may look isolated in one department may impact multiple others.

One way to meet this requirement is employment of existing ARMS aircraft for use within DHS. The aircraft were modified for and crews trained on intelligence gathering. Additionally, crews were trained to not only look at the initial threat that may be posed at the beginning of the mission, but also to look in detail for additional threats. Fewer DHS, Border Patrol or Drug Enforcement Administration analysts would be required due to the ARMS ASO analyst abilities. All of this would assist in improving budget expenditures.

The *BUR* recommended realigning DHS programs to support the Quadrennial Homeland Security Review mission areas. The goal was to unify program structure throughout DHS while evaluating DHS mission areas and identify gaps.¹⁰ Since DHS programs and departments do not work in a linear manner but across multiple areas, this realignment will help eliminate structural waste while establishing common operating procedures. Information sharing is also critical to achieving this mission. Without information sharing multiple departments could work on the same issue, which would waste time and duplicate efforts. Realigning the program structure may mitigate many DHS budget critics. The ARMS aircraft ability to conduct multiple different missions at

one time makes it ideal to help DHS share information throughout its structure. The ARMS aircraft could patrol a sector for trafficking of any kind while also monitoring a specific route or location. Multi-tasking the ARMS crew gives added value to DHS. Additionally the end of mission reports produced by the ASOs address all aspects of the mission and can break down the different missions conducted at the same time. Agencies within DHS will have aligned information when each uses the same report from ARMS missions.

One of DHS's largest programs is securing and managing our borders. The better use of resources can assist DHS in improving this program. Congressional concern over the cost of UAVs for border surveillance was discussed in a 2010 report. As far back as 2003, Congress directed DHS to use UAVs to reduce the number of agents on the ground while obtaining a better vantage point for border security. Congress believed UAVs would reduce, or even eliminate surveillance gaps along the border. The advantages of utilizing UAVs is a lower initial startup and operating cost than using ground based agents and the ability to access remote areas. The disadvantages are the long-term operating costs, the degradation of images produced in areas of rough terrain and dense foliage and current FAA's limitations on use of UAVs within national airspace.¹¹

The long-term development of programs needed to ensure the appropriate UAV is monitoring the U.S. borders is costly and time consuming. Modifying or adapting an already paid for and developed asset would ensure in the short-term, the borders were being monitored. The ARMS aircraft and crews are the perfect fit for this short-term need.

Other issues DHS must look at when using UAVs for aerial observation and intelligence gathering are communication interference between the UAV and the operating terminal. This could result in the UAV crashing into private citizen's property and putting innocent civilians in danger. Civil liberty concerns are also a factor for DHS when using UAVs within the national airspace. Since UAVs are not manned, loss of video link can occur and would result in recording of unintended areas. This could include U.S. citizens' private property, resulting in infringing on civil liberties. The ARMS equipment is controlled by the ASO in the back and will on record intended areas of surveillance. DHS must find an avenue to expand the current aerial observation and surveillance mission along the borders under the watchful budgetary eye of Congress and the American people.

DoD has already paid for the modification of the ARMS aircraft. Also the ARMS has the ability to perform even more surveillance missions than most UAVs. The tasks the ARMS aircraft can perform that are best suited for the DHS would be surveillance of the border, which is currently Homeland Security's largest mission. Unlike UAVs, the manned ARMS aircraft are easily dynamically retasked throughout a mission dependent on situation needs. This gives DHS and its reporting agencies greater mission capacity with one airframe.

The U.S. Army Reserve ARMS Aircraft Mission Capabilities and Training Requirements

The ARMS aircraft are Army C-12 aircraft that have been modified to perform an aerial intelligence, surveillance and reconnaissance mission. Each aircraft is equipped with a MX-15D imaging turret, four PeARL digital still cameras, a signal intelligence

(SIGINT) sensor and a robust communications package that can provide direct downlink to ground forces via Remote Optical Video Enhanced Receiver (ROVER) and One Station Remote Video Terminal (OSRVT).¹² The MD-15D has six sensors that provide:

1. Color daylight camera with zoom lens
2. Mono daylight camera with spotter lens
3. IR with high magnification 4-step zoom
4. Laser designator with LRF
5. Laser illuminator
6. Eye safe laser rangefinder

The six sensors can be used in conjunction with each other to provide optimal target tracking and integration with ground based units.¹³

The four PeARL digital cameras are two narrow-field digital cameras and two wide-angle digital cameras that work with PeARL software to create high-resolution maps or images.¹⁴ PeARL is conducted at altitudes of 7,000 to 16,00 feet Mean Sea Level (MSL). On operational deployments to Iraq and Afghanistan, the PeARL cameras have been able to map remote and difficult terrain. It has also been utilized to get images of a targeted area in which ground troops need better detail prior to a mission. Both the PeARL image resolution quality and SIGINT sensor characteristics are classified and will not be discussed in this thesis.

The ARMS aircraft come with a communications package that includes Frequency Modulation (FM), Ultra-High Frequency (UHF), Very High Frequency (VHF) and High Frequency (HF) radios to conduct air-to-air and air-to-ground audio communications.¹⁵ Since the aircraft has multiple radios in the communication package,

the ASO or aerial imagery analyst and pilots can talk to other aircraft, air traffic control and ground based units at the same time. This provides better situational awareness for the aircrew while maintaining communications with the supported unit. The ARMS aircraft also uses ROVER/OSRVT to send imagery obtained by the MX-15D to the units on the ground.¹⁶ The ASO can talk a ground force onto the target while both are able to see the same image. In order to have the most current image of the area the ground unit can request images of the target to give better situation awareness.

In order to obtain and maintain proficiency on each piece of equipment and mission set, pilots and ASOs have an initial train up program. Prior to starting the program, pilots must be proficient on the C-12 airframe, limitations and emergency procedures and basic flying skills. Once proficiency is evaluated on those basic skills, the pilot will begin a ground based training program to learn the equipment, each mission the equipment is typically used for and the pilot's role in each mission. Only two pilots conduct typical C-12 missions. Working with ASOs and ground units is a new dimension for C-12 pilots. Ground training takes a minimum of 16 hours but is individually based on the pilot's previous experience.¹⁷ All Army C-12 pilots were previous helicopter pilots and those pilots who were AH-64 Apache pilots have worked with imagery turrets before.

Once pilots complete the ground training they begin flight training with an ASO. There are five mission tasks an aviator must train on and demonstrate proficiency in to receive approval for conducting live missions. The requirement includes that "aviators will also fly a minimum of three ISR training mission scenarios (of which one must be at night) with a standardization pilot (SP), instructor pilot (IP) or unit trainer (UT). An SP or

IP will then conduct an evaluation upon completion of the mission training.”¹⁸ Each ISR training mission is four hours on average. Typical train-up time for an aviator is 30 hours. Fully trained and mission qualified aviators must demonstrate annual proficiency on all mission tasks and basic aviator skills.¹⁹ If an aviator becomes non-current on flying duties or on mission tasks, they must conduct a proficiency flight evaluation which is a minimum of one hour flight prior being qualified for mission duties. If an aviator does not conduct mission duties for 61 days, they are considered non-current and must retrain.²⁰

ASOs are not Military Occupational Specialty (MOS) positions within the Army. The ASO positions on the Modified Table of Organization and Equipment (MTOE) are 35 series or intelligence slots. The MTOE is also classified so the specific 35 series MOS cannot be discussed. Due to the ASOs being from an intelligence background, most have never had any flight experience and have four prequalification requirements prior to flight training.

1. Flight Physical. The ASO will have a current Army Flight Physical (DA Form 4186) with a Full Flying Duties (FDD) designation.
2. Altitude Chamber Training. The ASO will have attended either initial or refresher low-pressure high-altitude chamber training within the previous five years; if applicable, a waiver may be obtained .
3. Altitude Physiology Training. Low-pressure, high-altitude physiology training must be current before beginning flight training.
4. Aircrew Coordination Training – Enhanced (ACT-E) qualification.
Completed.²¹

After completion of the four initial requirements, the ASO begins mission ground and flight training. There are three stages to this training. The first stage does not have a required training time to progress, but on average it takes 40 hours. The second stage requires a minimum of 15 flights, each at four hours (or approximately 60 hours) to become mission qualified. At the end of this stage a proficiency flight evaluation will be conducted. Once an ASO passes the proficiency flight evaluation, they will be considered mission qualified. The final stage is annual mission currency. An ASO must complete 24 hours from an authorized crew duty station semi-annually and at least one task iteration annually in each mode they are required to fly.²² If an ASO does not complete these requirements, refresher training must be conducted. The ASO will then have to receive training and demonstrate proficiency in base tasks in order to be considered mission qualified again. Refresher training is dependent on individual proficiency and does not have a time requirement.²³

The cost to train pilots and ASOs in terms of man-hours and the currency requirements of the Army Reserves is on average over 40 hours. These skills are perishable if not exercised on a regular basis. Proficient pilots and ASOs will provide a valuable skill set to DHS. Since they are already trained in aerial surveillance and tracking, the DHS mission will enhance their already developed skill set. With funding a concern since the withdrawal from Iraq, working with DHS could increase operational funding, increase flying time, increase the use of their trained skills and decrease retraining, a more cost effective way to utilize flying hours. These real world missions will further develop the Army Reserve soldiers' ability to perform when required in future deployment requirements while providing cost effective assets to DHS.

The DoD's Ability to Expand the Current Role
DoD Plays in Homeland Security

Utilizing equipment for roles other than what they were procured for is key to the Army's success in battle. The ARMS aircraft are a prime example. Originally modified to find IEDs along the main supply routes in Iraq, the ARMS mission has transformed to include search and rescue capabilities, mapping and direct action assistance. Current research does not show the use of ARMS aircraft other than in Iraq or Afghanistan.

One mission using aircraft with similar capabilities as the ARMS aircraft is OBM. This mission uses a Cessna 208 Caravan with the same technology and similar equipment to conduct aerial overwatch for border patrol agents. OBM even uses Army Reserve trained "back-end" operators executing the mission.²⁴ Though the operators are Army trained and the equipment is similar to that of the ARMS, the mission is different.

There are some major differences between the missions that PdM ODI (Product Manager for Observe, Detect and Identify) supports in Afghanistan and Iraq compared to Big Miguel. While flying missions in OEF, OIF and OND, the aerial Intelligence, Surveillance and Reconnaissance (ISR) assets for which Gutierrez is responsible, must push down raw full motion video, signal intelligence and communication intelligence that require more command and control and a full set of ground stations to process and disseminate this data. Border Patrol mission requirements are not the same as those of ground forces in Afghanistan and Iraq; however they do have a requirement for an over watch mission in order to most effectively manage risks associated with transnational criminal organizations.²⁵

In less than the one year that OBM has been in operation, it has assisted the Border Patrol in detaining over 5,500 suspects and 63,000 pounds of marijuana.²⁶ Border Patrol has requested additional assistance from OBM with conducting overwatch of weapons smugglers, and tracking of vehicles and equipment used by criminal smugglers.

The ARMS aircraft and crews have the same capabilities as the OBM aircraft and crews. There would be no additional training necessary to transition the ARMS crews

into the OBM missions, which would provide a relevant mission for Army Reserve soldiers while providing consistent coverage to DHS agencies. Additionally this would help reduce the number of ground-based agents required to complete the Border Patrol mission. Since Border Patrol has already requested assistance in additional overwatch missions, the ARMS aircraft can work in conjunction with OBM aircraft to provide double the coverage when required. The ARMS aircraft do not have to replace OBM, but can provide assistance when necessary or act as a backup to OBM. There are Posse Comitatus Act requirements the ARMS aircraft must meet that OBM does not, which will be explained in the next section.

The Posse Comitatus Act and Its Relevance on this Subject

After looking at DHS requirements, the ARMS capabilities and benefit to the Army Reserves, the Posse Comitatus Act is another variable that must be looked at to determine if or how the ARMS aircraft can be used by DHS. In 1878 Congress passed the Posse Comitatus Act in response to federal troops occupying southern states during the Reconstruction Era. Southern Democrats no longer wanted the U.S. military to enforce laws within their states so Kentucky Congressman J. Proctor Knott proposed an amendment that read:²⁷

From and after the passage of this act it shall not be lawful to employ any part of the Army of the United States, as a posse comitatus, or otherwise, for the purpose of executing the laws, except in such cases and under such circumstances as such employment of said force may be expressly authorized by the Constitution or by act of Congress; and no money appropriated by this act shall be used to pay any of the expenses incurred in the employment of any troops in violation of this section and any person willfully violating the provisions of this section shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by fine not exceeding ten thousand dollars or imprisonment not exceeding two years or by both such fine and imprisonment.²⁸

In 1956 Congress added the Air Force to the act.²⁹ The Posse Comitatus Act prohibits the use of federal military troops operating under Title 10 U.S. Code from conducting direct law enforcement with the civilian population. Title 10 US code is the federal status under which military troops legally operate. The Posse Comitatus Act does not prohibit Title 32 or active duty military troops from conducting law enforcement. Title 10 military troops can be utilized for law enforcement on federal land or when the requested by the governor and approved by the Security of Defense in extreme cases where local law enforcement is overwhelmed and can no longer provide protection to the area.³⁰ The chart on the next page shows examples of exceptions to the Posse Comitatus Act. The chart only includes those pertaining to this thesis, but there are more exceptions.

Table 1. Exceptions to the Posse Comitatus Act

Exception	Conduct	Regulation	Statute
Indirect involvement	Incidental or conduct supporting law enforcement activities, such as providing equipment, training, maintenance, and non-binding advice.	DoD 5525.5	10 U.S.C 372-377
Military law enforcement on military installations	Law enforcement conduct directed against service members and civilians on military installations.	DoD 5525.5 E4.2.1.3	18 U.S.C 1382
Commanders' inherent authority to repel attacks, or protect immediate loss of life	When commanders exercise their inherent authority to protect their installation from attack or take immediate steps to protect the loss of life.	DoD 5525.5 E4.1.2.3. & E4.1.2.3.2; DoD 3025.12	10 U.S.C 809(e)
National Guard	The National Guard, when used in a "state status."	DoD 5525.5	
Military purpose doctrine	The PCA does not apply to actions performed primarily for a military purpose, such as investigating crimes against the military.	DoD 5525.5 E4.1.2.1	
Riot, Insurrection, or lawlessness	Extraordinary cases where the President employs his Constitutional authority to maintain order.	DoD 5525.5 E4.1.2.4 DoD 3025.12	10 U.S.C 331-334, & 12406 U.S. Const., Art II
Other Congressional Exceptions:			
Disaster relief	Troops providing relief during times of national disaster.	DoD 5525.5 DoD 3025.1 DoD 3025.15	Robert T. Stafford Disaster Relief and Emergency Assistance Act 42 U.S.C. 5121 et seq.
Quarantine	If an individual has a specifically identified communicable disease, health authorities may detain them. The President may use the military to assist the Surgeon General execute his duties.	DoD 5525.5 DoD 6000.12	42 U.S.C 97 & 264 (d)
Drug interdiction	Sharing of information and intelligence.	DoD 5525.5	10 U.S.C 371
Customs & immigration	Sharing of information and intelligence.	DoD 5525.5 E4.1.2.5.14	50 U.S.C 220
Customs & immigration	Sharing of equipment and facilities.	DoD 5525.5	10 U.S.C 372
WMD/E & protection of nuclear materials	Provide assistance to Dept. of Justice where a biological or chemical weapon of mass destruction poses a serious threat and civilian authorities require DoD assistance.	DoD 5525.5 E4	10 U.S.C 382 & 831 50 U.S.C 2301&2(1) 18 U.S.C 831
Protecting U.S. forests & fisheries	Removing enclosures from public lands.	DoD 5525.5 E4.1.2.5.1/ 5.2	42 U.S.C 1065 16 U.S.C 23 & 593 16 U.S.C 1861(a)
Indirect cooperation	Loan of equipment to other agencies.		31 U.S.C 1535

Source: Donald J. Currier, "The Posse Comitatus Act: A Harmless Relic from the Post-Reconstruction Era or a Legal Impediment to Transformation?" (Monograph, U.S. Army War College, Carlisle Barracks, PA, 2003), 19.

In 1982 Congress passed the DoD Authorization Act of 1982. It further established how the DoD and federal troops could assist in domestic law enforcement.

The act reads:

(1)Section 371, Use of information collected during military operations, permitted DOD to share information collected in the course of normal operations with law enforcement officials.

(2) Section 372, Use of military equipment and facilities, permitted DOD to make equipment, bases, or facilities available to civilian law enforcement officials.

(3) Section 373, Training and advising civilian law enforcement officials, permitted DOD to train civilian officials on any equipment made available to them under section 372.

(4) Section 374, Assistance by Department of Defense personnel, permitted DOD personnel to operate and maintain any equipment made available under section 372, but only to agencies that enforce federal drug, immigration, or customs law and subject to other specific restrictions such as high-level request and “emergency” conditions.

(5) Section 375, Restriction on direct participation by military personnel, required the Secretary of Defense to issue regulations so that any assistance provided under the authority of this law did not permit direct participation in specified law enforcement activities.

(6) Section 376, Assistance not to affect adversely military preparedness, prohibited assistance given under authority of this law that would adversely affect military preparedness.

(7) Section 377, Reimbursement, directed the Secretary of Defense to develop regulations for reimbursement by civilian agencies.

(8) Section 378, Non-preemption of other law, indicated that nothing in this law limited the executive’s use of military in law enforcement beyond that provided by the law existing prior to the 1982 Authorization Act.³¹

The above sections give the Army Reserves the ability to not only provide DHS with the aircraft and crews to assist with law enforcement, but also to maintain the equipment and be reimbursed for assisting law enforcement. The Army Reserves are a Title 10 force that must operate under the Posse Comitatus Act but the DoD Authorization Act of 1982 gives the Army Reserves the ability to assist DHS.

Counterdrug and border patrol are two areas in which the Army Reserves can assist DHS. The Army Reserves can support civil authorities with domestic law enforcement agencies during counterdrug operations only when requested. During counterdrug operations the Army Reserves can only provide support to law enforcement agencies. They cannot actually conduct law enforcement operations.³²

Indirect counterdrug support requires Secretary of Defense approval prior to conducting the operation. DoD indirect support includes but is not limited to loaning of equipment and operators to use the equipment, maintenance of the equipment and transfer of excess or outdated equipment. “The missions vary widely and may include ground reconnaissance; detection and monitoring; communications support; aerial reconnaissance; marijuana eradication; linguist support; air and ground transportation; intelligence analysis; tunnel detection; engineering support; and maintenance support.”³³

Each state and territory has a counterdrug mission. The National Guard is authorized to perform counterdrug missions if the state has an approved counterdrug plan. The state will receive additional funds based on that plan. Each state has Title 32 and state active duty soldiers whose jobs are to run the counterdrug program. “National Guard support can include linguist support (translators), investigative case and analyst support, operational or investigative case support, engineer support, subsurface diver support, domestic cannabis suppression support, transportation support, maintenance or logistical support, cargo or mail inspection, counterdrug-related training, training law enforcement agency or military personnel, ground reconnaissance, aerial reconnaissance, and demand reduction support.”³⁴ Though each state’s National Guard has their own aircraft, they do not have ARMS aircraft with the earlier mentioned capabilities.

In order to maintain combat readiness, the Army Reserve needs to keep the pilots and ASOs competent on the ARMS aircraft mission tasks. Working with DHS will give the Army Reservists the opportunity to hone their skills. Although it would be easier for National Guard Title 32 soldiers to perform this mission, the aircraft and crews are Army Reserve Title 10 assets. Northern Command will have to coordinate with DHS agencies

to endure Title 10 Reservists do not perform the actual law enforcement activities. In the past, DoD has committed UH-60 helicopters to the Drug Enforcement Agency (DEA). In order to not infringe on the Posse Comitatus Act, the Army Reserves should establish the same types of agreements. These agreements include which type of missions a DHS or related agency agent must be on the aircraft for and when the Title 10 aircrews can talk and coordinate with ground agents versus DHS agents.

The Cost Benefit to Both the DoD and the DHS

The ARMS aircraft are modified Army Reserve C-12 aircraft. Upon conception of TF ODIN, the Army needed an aircraft that was quieter than a helicopter, but could still do roadside aerial surveillance.³⁵ The Army Reserves provided 10 of their VIP transport C-12s for the mission. Once the modification was complete, the airframes could no longer be utilized for their original mission as transport aircraft. The Army Reserve has been conducting the VIP transport mission with the same requirements but 10 less airframes. The cost to procure a new C-12 is approximately \$10.5 million.³⁶ Since the ARMS aircraft cannot operate as transport aircraft and a new unit was stood up with the ISR mission as its core competency, proper utilization of the ARMS aircraft is essential.

The cost to train an ARMS pilot or ASO is based off of two factors: hourly cost of the ARMS aircraft and cost of the trainers. Both costs are already allocated due to maintenance contracts with the L3 Corporation starting in 2010 for five years and the cost of soldiers.³⁷ The hourly cost of a transport C-12 is over \$1,300 and the cost of the RC-12 Guardrail aircraft is over \$1,600.³⁸ Since the ARMS aircraft are more closely configured to the RC-12 Guardrail aircraft, the assumption is that the hourly cost is also closer to the RC-12 Guardrail aircraft. The Army Reserves has contracted to fly 50 hours per airframe

per month for all C-12 aircraft with an annual maintenance cost for the ARMS aircraft of approximately \$660,000. No matter how the airframe is utilized, or even if it is not utilized, this is a sunk cost.

The cost to train the pilots and ASOs is more difficult to calculate. Pilots can range in rank of Warrant Officer One to Major. Pilots are required to fly 60 to 110 hours annually depending on which flight activity category (FAC) they are designated.³⁹ ASO ranks range from Specialist to Sergeant First Class. ASOs are required to fly 48 hours annually.⁴⁰ ASOs do not have FACs. The Army Reserve is allocated the flight training periods annually through either battle assembly or additional flight training periods. Soldiers pay is automatically authorized for each unit and the money cannot be transferred to other programs or areas within the Army Reserves. The best application of this flight time is to conduct missions as opposed to retraining.

DHS is already required by Congress to expand its use of UAVs for border security.⁴¹ The cost to procure a small to medium UAV is anywhere from \$350,000 to \$4.5 million, but the long-term operating and maintenance costs are much higher than that of a manned aircraft.⁴² DHS needs to streamline their already limited budget while expanding their capabilities and using ARMS aircraft in the role of the UAVs would accomplish that.

As the DoD heads into another fiscal year with a smaller budget and the possibility of sequestration is discussed throughout Congress, the Army Reserves needs to prove the ARMS aircraft's relevance. By adapting the mission tasks to support DHS, the Army Reserves will maintain trained pilots and ASOs while maintaining the airframes relevancy. Congress has verified the need for aerial surveillance along the U.S.

borders to assist ground-based agents with the arduous task of patrolling vast uninhabitable areas. Though Congress suggested the use of UAVs, the long-term cost and possible risks associated with UAVs have so far precluded their use. The ARMS airframes have the same capabilities if not more than a UAV with already trained crews. Integrating the crews into DHS missions will increase combat readiness for the Army Reserve soldiers and DHS agencies capabilities.

The Army Reserves has already committed the hourly cost to fuel and maintaining the ARMS aircraft. Combining real world missions with already dedicated funds will show Congress and the American people that government agencies can be fiscally responsible. The use of ARMS aircraft and crews for DHS will also support the *BUR*'s requirement to expand the role of joint operations. The outcome is a benefit to both agencies with increased capabilities and a reduction in overall cost throughout the government.

Conclusion

The research detailed in this chapter has broken down the history of DHS and need for aerial assets to assist DHS, current missions of DHS and their current limitations of funding and resources. The chapter is divided into five categories; (1) the DHS's history, funding and current mission needs, (2) the U.S. Army Reserve ARMS aircraft mission capabilities and training requirements, (3) the DoD's ability to expand the current role that the DoD plays in homeland security, (4) the Posse Comitatus Act and its relevance on this subject, and (5) the cost benefit to both the DoD and the DHS. Analysis has shown how the ARMS aircraft are capable of filling that gap, the benefit to both agencies and how the missions can be done without infringing on the Posse Comitatus

Act. The next chapter further analyzes the question of what the DHS currently requires to meet the national threat environment while working within the current budget constraints and the ability of the ARMS aircraft to assist in fulfilling those requirements. At the conclusion a recommendation will be made to answer that question.

¹Department of Homeland Security, “Creation of the Department of Homeland Security,” <http://www.dhs.gov/creation-department-homeland-security> (accessed 24 March 2012).

²U.S. Department of Homeland Security, *Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland (QHSR)* (Washington, DC: Department of Homeland Security, February 2010), X.

³Department of Homeland Security, “Department of Homeland Security Organizational Chart,” <http://www.dhs.gov/xlibrary/assets/dhs-orgchart.pdf> (accessed 23 September 2012).

⁴Shawn Reese, “Defining Homeland Security: Analysis and Congressional Considerations,” Congressional Research Service, 3 April 2012, <http://www.fas.org/sgp/crs/homesec/R42462.pdf> (accessed 21 November 2012), 8.

⁵Mueller and Stewart, 1.

⁶Reese, 1.

⁷U.S. Department of Homeland Security, *Bottom-Up Review Report (BUR)*, vii.

⁸*Ibid.*, ix.

⁹*Ibid.*, 16.

¹⁰*Ibid.*, D-1.

¹¹Haddal and Gertler, 3.

¹²Buford.

¹³L3 Wescam, “MX Series Products and Services,” Wescam.com, http://www.wescam.com/products/products_services_1f_mx15d.asp (accessed 9 October 2012).

¹⁴Buford, 30.

¹⁵Headquarters, Department of the Army, TM 1-1510-225-10, *Operator's Manual for Army C-12R Aircraft* (Washington, DC: Government Printing Office, 15 September 2009).

¹⁶“ROVER III/OSRVT, Remote Video Terminal for One System GCS,” Defense-update.com, <http://defense-update.com/products/r/rover.htm> (accessed 9 October 2012).

¹⁷Commander, 339th Military Intelligence Company, “339th MI CO Standard Operating Procedures,” 27 January 2011, L-75.

¹⁸*Ibid.*

¹⁹*Ibid.*, L-51.

²⁰Headquarters, Department of the Army, AR 95-1, *Aviation Flight Regulations* (Washington, DC: Government Printing Office, 12 November 2008), 24.

²¹Buford, 5.

²²*Ibid.*, 9.

²³*Ibid.*, 6.

²⁴Pollachek.

²⁵*Ibid.*

²⁶*Ibid.*

²⁷Matthews, 32.

²⁸*Ibid.*, 33.

²⁹*Ibid.*, 41.

³⁰Headquarters, Department of the Army, FM 3-28, 5-2.

³¹Matthews, 43.

³²Headquarters, Department of the Army, FM 3-28, 5-4.

³³*Ibid.*, 5-5.

³⁴*Ibid.*, 5-6.

³⁵Thom Shanker, “At Odds With Air Force, Army Adds Its Own Aviation Unit,” *The New York Times*, 22 June 2008, http://www.nytimes.com/2008/06/22/washington/22military.html?_r=1&partner=rssnyt&emc=rss (accessed 3 March 2012).

³⁶Department of the Army, Procurement Programs, “Committee Staff Procurement Backup Book Fiscal Year 2012 Budget Estimate,” February 2011, 5.

³⁷David Huber, “L-3 Takes on \$300M Worth of Logistics Tasks for Navy, Air Force,” *Washington Technology*, 24 May 2011, <http://washingtontechnology.com/articles/2011/05/24/l3-logistics-navy-air-force-aircraft.aspx> (accessed 23 March 2012).

³⁸Roth, 1.

³⁹U.S. Department of the Army, TC 1-218, 2-5.

⁴⁰U.S. Department of the Army, *Non-rated Aircrew Training Manual*, 9.

⁴¹Haddal and Gertler, 2-3.

⁴²Harlan Geer and Christopher Bolkcom, “Unmanned Aerial Vehicles: Background and Issues for Congress” (Report for Congress, Washington, DC, 25 April 2003).

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This thesis posed the question of what are the DHS current requirements to meet the national threat environment while working within the current budget constraints and the ability of the ARMS aircraft to assist fulfilling those requirements without infringing on the Posse Comitatus Act? The last chapter compiled the research on this topic and analyzed it in reference to the thesis question. The analysis was divided into five main categories: DHS's history, funding and current missions needs, the U.S. Army Reserve ARMS aircraft mission capabilities and training requirements, the DoD's ability to expand the current role that the DoD plays in homeland security, the relevance of Posse Comitatus Act on this subject, and the cost benefit to both the DoD and the DHS.

This chapter will present conclusions drawn from the analysis in chapter 4. From that analysis a recommendation will be made that the ARMS aircraft can be used by DHS and its reporting agencies if the correct control measures are emplaced. This recommendation will break down the types of missions that would benefit both DHS and the Army Reserves, the cost benefit to both agencies, what control measures are needed to work within Posse Comitatus, and future potential growth areas of this program if accepted as a program of record for the Army. Additionally, this chapter will discuss further research that will need to be conducted if the recommendation is accepted.

Conclusions

The threat to Homeland Security has not decreased in the last 10 years, and through the hard work of DHS and its reporting agencies the safety of the American people has been preserved from terrorist activities. With the issuance of the *2010 Quadrennial Homeland Security Review*, the *BUR*, and the *2012 DHS Strategic Plan*, DHS has a more specific focus on their mission and funding for that mission. If funding history continues as it has over the last 10 years, a conclusion could be drawn that DHS will always require more assets and programs than their budget allows for. The 2010 Congressional Research Report “Homeland Security: Unmanned Aerial Vehicles and Border Surveillance” documented multiple Congressional mandates urging DHS to utilize unmanned aerial surveillance as a way to reduce ground agents while obtaining better situational awareness along the southern border of the U.S.¹

With OMB, DHS has already used manned airframes similar to the ARMS aircraft. The ability to substitute manned airframes for unmanned airframes has proven beneficial. The ARMS aircraft and crews should be given the mission to assist DHS with border patrol missions. This capacity will expand the Border Patrol’s ability to monitor the borders. The ARMS aircraft could be used in conjunction with the OBM aircraft to enhance the capability of the Border Patrol. Another option is that each airframe could be used individually to increase overall time spent on aerial monitoring of the border. Possible missions for the ARMS aircraft include border security, search and rescue, and mapping. The ARMS crews should be used but control measures must be in place to ensure Posse Comitatus is abided by.

A second conclusion in this time of budget cuts, sequestration and downsizing of the military, is that the Army Reserves must show it is still relevant in order to continue receiving required funding. By providing a real world mission multiplier like the ARMS aircraft and crews to DHS, the Army Reserves will be doing just that. The more mission types the ARMS aircraft can provide, the more the Army Reserves will prove its relevance. Without proof of relevance, funding may be cut and the already sunk cost of aircraft modification, MTOE structure change and pilot and ASO training will all be lost.

DHS can benefit by showing Congress and other critics who have called for better fiscal responsibility from DHS, that programs are being developed to work with outside agencies to better utilize DHS's existing budget. DHS will be getting the asset along with crews already trained for a mission DHS currently requires. The existing airframes offset the start up costs for DHS. Additional saving is the long-term cost of maintaining the airframes, housing the airframes and continued training of the aircrews. All of this will save DHS millions of dollars while still receiving the benefit of the asset.

As in the case of Defense Support to Civil Authorities, the Army Reserve should document costs associated with conducting DHS missions and request DHS and its agencies reimburse the Army for these costs.² This will assist the Army Reserve with additional training dollars to ensure new pilots and ASOs can be properly trained for this mission. DHS will still benefit from this mission because it has a ready to use asset with trained crews. If DHS follows the 2010 Congressional Report to prioritize funding based on homeland security priorities, the additional funding needed to support the ARMS mission would be available since the border protection mission is a DHS priority.

Finally, Posse Comitatus is not going away, nor will it be modified to allow Title 10 Reserve soldiers the ability to conduct law enforcement activities within the U.S. The Army Reserves must design mission sets within the boundaries of Posse Comitatus that can provide the support DHS requires. These protocols will be explained in the recommendations section of this chapter.

Recommendations

There is one company with nine ARMS aircraft in the Army Reserve located in Fort Worth, Texas. The Army Reserves can provide DHS with ARMS aircraft support on a cyclical basis. Most Army Reserve soldiers are available on a part-time basis but DHS and Border Patrol require scheduled availability. One way to combat this issue is to use annual training time to support DHS. Depending on the Army Force Generation (ARFORGEN) Cycle year the Army Reserve unit is in, annual training is a two-week period used to train mission tasks to prepare for deployment. The tasks the ARMS aircraft would be providing for DHS are mission tasks conducted during deployments and would meet the annual training requirement. The Army Reserve could stagger the annual training periods for crews to allow coverage of this mission for a two- to three-month period. This timeframe would be dependent on aircraft availability due to maintenance and number of trained pilots and ASOs.

The best way to allocate the limited time the ARMS crews would be available is to look at peak times Border Patrol needs assistance based on historical data of smuggling trends for drugs, humans and weapons. Scheduling of the ARMS aircrews to perform the border patrol mission would be dependent on that data. The two- to three-month period the Army Reserves can provide support could also be split up into two-week timeframes

spread out through the year. This would give coverage throughout the year, just not for a prolonged period of time for each cycle.

DHS could find the ARMS aircraft necessary for increased border patrol on a regular basis. In this case, DHS could provide additional funding to the Army Reserves to bring Title 10 Reserve soldiers onto Active Duty for six-month rotations. This would afford DHS complete coverage throughout the year. Depending on the scope of mission types and area of the border requiring patrolling, only three crews on orders with one aircraft would be needed at any given time. When scheduling an aircraft for missions, three crews to cover one aircraft for a 24-hour period is the template typically used. With budgeting constraints, DHS could reprioritize missions to utilize the ARMS aircraft if the Department believes the border surveillance mission should be maintained.

As stated earlier, possible missions for the ARMS aircraft include border security, search and rescue, and mapping. The border security mission would be basic patrolling of the southern border. The aircraft would be given a specific sector to patrol and monitor for any illegal activity spotted. This mission would require having a border patrol agent onboard the aircraft to talk to the ground Border Patrol agents. This would eliminate infringement on the Posse Commitatus Act. The pilots and ASOs would still receive the mission training of flying similar missions to those the ATM require while not directly conducting law enforcement missions. This type of support is specifically addressed in the DoD Authorization Act of 1982 Sections 371 through 375.

A second mission the ARMS crews could perform is to use PeARL equipment to map the southern border monthly. This would assist Border Patrol looking for changes in the terrain that may indicate tunnels being built or new trafficking routes formed. The

mapping can also be used like it was in Iraq (as explained in chapter 4) prior to a Border Patrol drug enforcement mission. Once Border Patrol has a known location of a traffic route or tunnels, detailed images can be taken to ensure situational awareness before executing the mission. This can decrease the risk to Border Patrol agents and increase mission success. Additional missions the PeARL equipment can provide is mapping of the U.S. vast northern border. There are fewer Border Patrol stations on the northern border, which leaves areas of vulnerability for DHS. Mapping will provide these limited station agents with a better understanding of their area of operation and assist them on where to focus their limited time and resources.

The ARMS PeARL mission cannot be conducted by any other aircraft in DHS inventory or any UAV on the market. Additionally, only the ARMS crews are fully qualified to conduct this mission. This is the best reason for the recommendation to have the ARMS aircraft conduct missions for DHS, specifically the PeARL mission.

The application of any of these recommendations will benefit both DHS and the Army Reserve. Combining these recommendations will further increase the cost effectiveness of this program. The Army Reserves will show their relevance in a budget constraint environment and DHS will have a much needed asset at a reduced cost to the other alternatives currently available.

Recommendations for Further Study

Much time and effort has gone into the research and analysis of this topic, but there are additional issues that should be reviewed if this becomes a program of record for the Army. These issues were reviewed in this thesis due to the security level of one of

the issues and the timeliness of the second issue. Recommended further research that would be beneficial in planning and executing this mission include:

1. Research the classified SIGINT mission and determine if application of this technology could be used to assist DHS. Research should analyze how this technology applies to the Posse Comitatus Act and the Constitution to determine if conducting this mission within the U.S. would be legal.
2. Research the diplomatic impact of the use of ARMS aircraft and Title 10 Army Reserve forces on Mexican relations. If the Mexican government feels the U.S. is trespassing on the civil rights of Mexican citizens, there may be a diplomatic consideration not to use the ARMS aircraft. Depending on the timeframe, the use of the ARMS aircraft and crews may be modified to lessen a negative diplomatic impact.

Conclusion

Using a documentation review, this thesis has researched the ability of the ARMS aircraft to be used within DHS. The analysis of chapter 4 provided the answer that Congress, DHS and the American people desire better utilization of government assets. This program will satisfy that request. The recommendations above introduce an enhanced DHS capability by providing greater coverage of the border, as well as state of the art mapping capping that currently does not exist. The analysis of both the ARMS aircraft and crews discovered the capabilities of two missions best suited for DHS; border patrol and mapping using PeARL equipment.

The research and analysis conducted in this thesis also provided recommendations that the ARMS aircraft and crews could be used to support DHS without infringing on

the Constitution and the Posse Comitatus Act. This joint mission would benefit both DHS and the Army Reserves. The program can be tailored as needed dependent on the requirements of DHS. Homeland Security Secretary Janet Napolitano stated in the *BUR*, “First and foremost, it (the Bottom Up Review) provides direction for reinforcing the cornerstone of homeland security: preventing terrorism.”³ If the Army Reserves and DHS work together, homeland security will be enhanced.

¹Haddal and Gertler, 2-3.

²Headquarters, Department of the Army, FM 3-28, 8-14.

³U.S. Department of Homeland Security, *Bottom-Up Review Report (BUR)*, iv.

BIBLIOGRAPHY

Books

Matthews, Matt. *The Posse Comitatus Act and the United States Army: A Historical Perspective*. Fort Leavenworth, KS: Combat Studies Institute Press, 2006.

_____. *The U.S. Army on the Mexican Border: A Historical Perspective*. OP 22. Fort Leavenworth, KS: Combat Studies Institute Press, 2007.

Government Documents

Buford, Michael F., Major. "Non-rated Aircrew Training Manual, Aerial Reconnaissance Multi-Sensor (ARMS) C-12R1." n.d.

Commander, 339th Military Intelligence Company. "339th MI CO Standard Operating Procedures." 27 January 2011.

Department of the Army, Procurement Programs. "Committee Staff Procurement Backup Book Fiscal Year 2012 Budget Estimate." February 2011.

Greer, Harlan, and Christopher Bolkcom. "Unmanned Aerial Vehicles: Background and Issues for Congress." Congressional Research Service Report for Congress. Washington, DC, 25 April 2003.

Headquarters, Department of the Army. AR 95-1, *Aviation Flight Regulations*. Washington, DC: Government Printing Office, 12 November 2008.

_____. FM 3-28, *Civil Support Operations*. Washington, DC: Government Printing Office, 20 August 2010.

_____. TC 1-218, *Aircrew Training Manual, Utility Airplane, C-12*. Washington, DC: Government Printing Office, September 2005.

_____. TM 1-1510-225-10, *Operator's Manual for Army C-12R Aircraft*. Washington, DC: Government Printing Office, 15 September 2009.

Quantock, David E. "Homeland Operations in Army Concepts." White Paper, U.S. Army Maneuver Support Center of Excellence, Ft. Leonard Wood, MO, August 2011.

Roth, John P. "Fiscal Year 2012 Department of Defense Fixed Wing and Helicopter Reimbursement Rates." Congressional Research Service Report for Congress. Washington, DC, 13 October 2001.

U.S. Department of Homeland Security. *Bottom-Up Review Report (BUR)*. Washington, DC: Department of Homeland Security, July 2010.

_____. *Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland (QHSR)*. Washington, DC: Department of Homeland Security, February 2010.

Internet Sources

Bellavita, Christopher. "Changing Homeland Security: What Is Homeland Security." *Homeland Security Affairs* 4, no. 2 (2008). www.hsaj.org (5 November 2012).

Biesecker, Calvin. "National Guard Taking On Aerial Support Role Along Southwest Border." *Defense Daily*, 20 December 2011. <http://lumen.cgsccarl.com/login?url=http://proquest.umi.com.lumen.cgsccarl.com/pqdweb?did=2567748151&Fmt=2&clientId=5094&RQT=309&VName=PQD> (accessed 24 March 2012).

Department of Homeland Security. "Creation of the Department of Homeland Security." <http://www.dhs.gov/creation-department-homeland-security> (accessed 24 March 2012).

_____. "Department of Homeland Security Organizational Chart." <http://www.dhs.gov/xlibrary/assets/dhs-orgchart.pdf> (accessed 23 September 2012).

Felderman, Bob BG. "NORAD & USNORTHCOM Operation Plans Summary." 30 September 2009. http://info.publicintelligence.net/20080930_Felderman_NC_Plans_Summary_Interagency.pdf (accessed 28 November 2012).

Haddal, Chad, and Jeremiah Gertler. "Homeland Security: Unmanned Aerial Vehicles and Border Surveillance." Congressional Research Service Report for Congress. 2010. <http://www.fas.org/sgp/crs/homesec/RS21698.pdf> (accessed 21 November 2012).

Hobijn, Bart, and Erick Sager. "What Has Homeland Security Cost? An Assessment: 2001-2005." *Current Issues in Economics and Finance* 13, no. 2 (February 2007). http://www.newyorkfed.org/research/current_issues/ci13-2.pdf (accessed 10 August 2012).

"The Homeland Security Market 2011-2021." *PR Newswire*, 9 August 2011. <http://lumen.cgsccarl.com/login?url=http://proquest.umi.com.lumen.cgsccarl.com/pqdweb?did=2420072451&Fmt=2&clientId=5094&RQT=309&VName=PQD> (accessed 24 March 2012).

Huber, David. "L-3 Takes on \$300M Worth of Logistics Tasks for Navy, Air Force." *Washington Technology*. 24 May 2011. <http://washingtontechnology.com/articles/2011/05/24/l3-logistics-navy-air-force-aircraft.aspx> (accessed 23 March 2012).

L3 Wescam. "MX Series Products and Services." Wescam.com. http://www.wescam.com/products/products_services_1f_mx15d.asp (accessed 9 October 2012).

- Masnick, Mike. "Homeland Security Doesn't Do Cost/Benefit Analysis; They Just Do Fear And Bluster." *Techdirt*, 10 May 2011. <http://www.techdirt.com/articles/20110429/23582414094/homeland-security-doesnt-do-costbenefit-analysis-they-just-do-fear-bluster.shtml> (accessed 15 May 2012).
- Miles, Donna. "Task Force Targets Human Networks Behind IEDs." *American Forces Press Service*. 11 March 2011. <http://www.army.mil/article/53114/> (accessed 5 November 2012).
- Mueller, John, and Mark G. Stewart. "Balancing the Risks, Benefits, and Costs of Homeland Security." *Homeland Security Affairs* 7, article 16 (August 2011). <http://www.hsaj.org/?article=7.1.16#> (accessed 21 November 2012).
- Pollachek, Brandon. "Northern Command Helps Border Patrol with Southwest Mission." *M2 Presswire*, Coventry. 31 January 2012. <http://lumen-.cgscarl-.com/login?url=http://proquest-.umi-.com-.lumen-.cgscarl-.com/pqdweb?did=2574243271-&Fmt=2-&clientId=5094-&RQT=309-&VName=PQD> (accessed 21 November 2012).
- Reese, Shawn. "Defining Homeland Security: Analysis and Congressional Considerations." Congressional Research Service Report for Congress. 3 April 2012. <http://www.fas.org/sgp/crs/homesec/R42462.pdf> (accessed 21 November 2012).
- Roosevelt, Ann. "Army Aviation Manned/Unmanned Teaming Shortens Sensor To Shooter Time, General Says." *C4I News*, 24 May 2007. <http://lumen-.cgscarl-.com/login?url=http://proquest-.umi-.com-.lumen-.cgscarl-.com/pqdweb?did=1276603551-&Fmt=2-&clientId=5094-&RQT=309-&VName=PQD> (accessed 1 April 2012).
- "ROVER III/OSRVT, Remote Video Terminal for One System GCS." Defense-update.com. <http://defense-update.com/products/r/rover.htm> (accessed 9 October 2012).
- Shanker, Thom. "At Odds With Air Force, Army Adds Its Own Aviation Unit." *The New York Times*, 22 June 2008. http://www.nytimes.com/2008/06/22/washington/22military.html?_r=1&partner=rssnyt&emc=rss (accessed 3 March 2012).
- Sutherland, J. J. "Battle Against IEDs Spreads from Iraq to Afghanistan." *Morning Edition*, 28 October 2009. <http://lumen.cgsccarl.com/login?url=http://proquest.umi.com.lumen.cgsccarl.com/pqdweb?did=1888231581&Fmt=3&clientId=5094&RQT=309&VName=RQD> (accessed 24 April 2012).
- Tittel, Steven J. "Liberty and Lethality: Integrating MC-12W Liberty and Light Attack/armed Reconnaissance Aircraft Operations." Monograph, School of Advanced Military Studies, Command and General Staff College, 2010.

- <http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll3/id/2579> (accessed 24 March 2012).
- Toomer, Jeffery K. "Strategic View of Homeland Security: Relooking the Posse Comitatus Act and DOD's Role in Homeland Security." Monographs, School of Advanced Military Studies, Command and General Staff College, 2002.
<http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll3/id/214> (accessed 24 March 2012).
- "U.S. Security Spending Since 9/11." National Priorities Project, 26 May 2011.
<http://nationalpriorities.org/analysis/2011/us-security-spending-since-911/> (accessed 10 August 2012).
- Washington, Fredrick L. "Army's Counterintelligence Role in Homeland Defense." Master's Thesis, Command and General Staff College, 2002.
<http://cgsc.contentdm.oclc.org/cdm/ref/collection/p4013coll2/id/295> (accessed 28 November 2012).

Periodicals

- Booth, William. "Keeping Watchful Eye on Border, but Staying Out of Sight." *The Washington Post*, 22 December 2011.
- Bumiller, Elisabeth, and Thom Shanker. "Defense Budget Cuts Would Limit Raises and Close Bases." *New York Times*, 26 January 2012.
- "Congress Reverses Posse Comitatus Act Changes." *The New American* 24, no. 10 (12 May 2008): 7.
- Kuo, S. Didi. "High Ground over the Homeland." *Air & Space Power Journal* 17, no. 1 (Spring 2003): 47.
- Lujan, Thomas R. "Legal Aspects of Domestic Employment of the Army." *Parameters* 27, no. 3 (Autumn 1997): 82-98.
- Pine, Art. "Should Congress Scrapp Posse Comitatus." *United States Naval Institute. Proceedings* 131, no. 12 (December 2005): 46.
- Rapp, Geoffrey. "Unmanned Aerial Exposure: Civil Liability Concerns Arising from Domestic Law Enforcement Employment of Unmanned Aerial Systems." *North Dakota Law Review* 85, no. 3 (2009): 623-648.
- Trebilcock, Craig. "Resurrecting Posse Comitatus in the Post-9/11 World." *Army* (1 May 2009): 21-24.
- Vane, Michael, and David Quantock. "Countering the Improvised Explosive Device Threat." *Army* 61, no. 3 (March 2011): 56-61.

Other Sources

Currier, Donald J. "The Posse Comitatus Act: A Harmless Relic from the Post-Reconstruction Era or a Legal Impediment to Transformation?" Monograph, U.S. Army War College, Carlisle Barracks, PA, 2003.

Kimberly, Jack L. "A Bold 21st Century Strategy for U.S. Army Airborne ISR." Strategy Research Project, U.S. Army War College, Carlisle Barracks, PA, 2007.

Weiger, Rusty. "Military Unmanned Aircraft Systems in Support of Homeland Security." Strategy Research Project, U.S. Army War College, Carlisle Barracks, PA, n.d.

INITIAL DISTRIBUTION LIST

Combined Arms Research Library
U.S. Army Command and General Staff College
250 Gibbon Ave.
Fort Leavenworth, KS 66027-2314

Defense Technical Information Center/OCA
825 John J. Kingman Rd., Suite 944
Fort Belvoir, VA 22060-6218

Gregory P. Bedrosian
Department for Army Tactics
USACGSC
100 Stimson Ave.
Fort Leavenworth, KS 66027-2301

Richard S. Faulkner
Department of History
USACGSC
100 Stimson Ave.
Fort Leavenworth, KS 66027-2301

Matthew T. Fuhrer
Department of Logistics and Resource Operations
USACGSC
100 Stimson Ave.
Fort Leavenworth, KS 66027-2301

Lawrence D. Wilson
Department for Army Tactics
USACGSC
100 Stimson Ave.
Fort Leavenworth, KS 66027-2301