Effective Surveillance and Detection at the Southwest Border

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Date: 04/10/2015

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Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Intelligence Management
Abstract

Research question: “What is the effectiveness of the Border Patrol’s Predator RPA surveillance program in curtailing the threat at the border and how can the program be made more efficient?”

Several different aspects of border threat and surveillance will be addressed. Mexican cartels have been trafficking drugs and sex workers across the southwest border for decades now, and this activity results in considerable consequence to the United States (Morris, 2013). Moreover, Iranian backed Hezbollah has had a presence in South America long enough now to know the key players in the underworld and has made connection with Mexican cartels (Mora, 2015). Today, an obvious consideration for security officials is the scenario in which terrorist operatives from such entities as Hezbollah, ISIS, or Al-Qaeda are smuggled across the border using established cartel smuggling routes. Additionally, there are significant stretches of the U.S. border that are uninhabited and not patrolled or monitored by DHS (Steinmetz, 2011). What if a terrorist group decided to move operatives across one of these stretches? These are all reasons why there is a real need for surveillance aircraft such as the Predator to cover hundreds of miles quickly with powerful sensors that see through the cover of terrain. This research will examine the characteristics as well as the current performance metrics of the Predator over the southwest border. The research revealed that there are currently several deficiencies with the operation and costs of the Predator. However, this has nothing to do with the Predator’s capability which has been extremely effective in other parts of the world. It rather has to do with items such as funding, flight hours, and coverage that need to be adjusted to make use of the awesome capability of Predator remotely piloted aircraft (RPA).
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Chapter 1
Introduction

Research question: “What is the effectiveness of the Border Patrol’s Predator RPA surveillance program in curtailing the threat at the border and how can the program be made more efficient?”

The purpose of this research is to briefly describe the threat at the border and provide an evaluation of the Border Patrol’s Predator surveillance program. The research has included a range of materials from government reports, security journals obtained from the Henley Putnam library, open web articles, and articles from major newspapers such as the New York Times and LA Times. A lot of the information on Customs and Border Protection (CBP) Predators had to be obtained from the open web instead of the HPU Library since the Border Patrol has only recently begun to use Predators for surveillance. In fact, after not finding much on Predators in the online library, the University librarian suggested searching the open web and provided an open web research guide to assist in this.

Threats at the Border

The research provided sometimes stunning enlightenment such as the fact that drug shipments which are typically valued in the millions of dollars or more are often exchanged in broad daylight at a public place such as a gas station or rest area just off a U.S. interstate between the stash house operator and the load car driver who just moved the shipment across the southwest border through a border point of entry (POE) (Marosi, 2011). During the exchange the drugs are concealed in some kind of container. Also, research revealed the inner workings of how shipments are actually moved through POEs by predominantly tractor trailers (Marosi, 2011). To give a gripping example of smuggling, in a recently released Hollywood movie “The
Counselor” a cartel smuggling method was to conceal a drug shipment inside of 50 gallon barrels that were further concealed in the raw sewage inside of a septic tank truck moving along in Arizona (Movie Guide, 2013). What law enforcement agency would be motivated to empty the sewage from that truck to check for the barrels? When that truck arrived at its destination, cartel personnel simply empty the sewage from the truck to get at the barrels.

Southwest border security is a critical issue for America today and any lack of vigilance results in an assortment of serious repercussions for America. Chicago, despite being a very nice city with an excellent international airport, is notorious for violence and murder every year that is well publicized in the national news (Morris, 2013). The reason for this is that Chicago happens to be the main operational hub in America for drug cartels, particularly Sinaloa, because of the city’s centrality to air, rail, and road networks (Morris, 2013). Much of the violence that occurs in Chicago, according to one DEA official, is related to cartel turf wars (Morris, 2013). Another consequence is that millions of Americans are in prison today on drug violations and a criminal record is a serious obstacle for them in obtaining employment and a place to live after getting out (Porter, 2012). If millions of people with drug violations on their record can’t obtain good paying work or even a place to stay, it is easy to envision a scenario of them turning back to crime to survive (Porter, 2012).

In recent times, Mexican cartels have been battling it out in Central America for control of smuggling routes, and this has made it very dangerous for the youth there to work for a livelihood (Carpenter, 2014). Both the violence as well as lack of money thus caused a recent refugee crisis at the southwest border that has been a tremendous, unexpected cost to U.S. federal agency budgets. The border patrol became tied up in providing care for the displaced youth resulting in a reduction of border security that was likely exploited by cartels (Carpenter, 2014).
Additionally, it is not hard to imagine that any terrorist group would try to use established human trafficking routes to infiltrate America. These are clear examples that establish the threat and why an assessment of the aerial surveillance program covering the border is necessary.

Cartels are clever and imaginative in the methods they use to smuggle drugs, weapons, humans, and money back and forth across the border. This is because of the staggering profits in the billions not just from sales in the United States but from Europe and Asia as well (Zarriello & Gray, 2014). Various methods of transit are used such as tractor trailers, cars, tunnels under the border, ultralights, submarines, and more that cartels use to move contraband. The fact that a good portion of drug shipments enter the United States right through official points of entry (POEs) by tractor trailer is an issue for CBP (Zarriello & Gray, 2014). Cartels brutally protect key smuggling routes both in Mexico near the border as well as throughout the United States, and these routes are where aerial surveillance should be looking (Zarriello & Gray, 2014). For example, the route that runs north from Mexico into McAllen, TX is a heavily used drug corridor with McAllen being a frequent origination point for drug shipments moved throughout the United States (Zarriello & Gray, 2014).

**Predator Surveillance**

The border is enormous in size spanning thousands of miles and coverage by aerial surveillance with powerful sensors that detect illegals is a force in preventing threats from sneaking across the border with cocaine, sex workers, or a dirty bomb. No border agent with binoculars looking along the border has near the coverage capability that a Predator has using an IR sensor flying quickly for hundreds of miles at night to detect movement. A Predator moves much faster, sees more, senses more, and flies for hundreds of miles as compared to someone
moving in a truck getting out every so often with binoculars. However, there are several criticisms of CBP’s Predator program particularly with regard to cost and operations.

This research is important and necessary to the field of Strategic Security because it illustrates the reasons why aerial surveillance is critical to detecting border threats and provides advice for ameliorating issues with the Border Patrol’s current RPA surveillance program. Military and police know the force multiplication that occurs when aerial surveillance is combined with agents on the ground. America needs the best assets possible for surveillance at the border.

Chapter 2
Literature Review

Drug cartels have been smuggling drugs into the United States for decades, but in recent years they have extended their reach into most areas of the United States such that sheriffs across the country are alarmed at the cartel activity they’re seeing in jurisdictions far from the southern border (Riddell, 2014). Cartel violence occurs in cities all over the U.S. but is particularly problematic in Chicago (Morris, 2013). With cartels making billions in annual profits from sales in America, Europe, and Asia, they have the funds to purchase advanced weaponry and technology that greatly facilitates their business even going after people who post anything untoward about them on the internet (Morris, 2013).

Surveillance and detection of threats attempting to cross the southwest border is critical to disrupt the ability of these threats to enter America. The Border Patrol has been using Predator remotely piloted aircraft since 2006 for this task, and these aircraft are sophisticated surveillance platforms that are highly capable of detecting people attempting to cross the border covertly.
Predators provide many advantages to U.S. authorities, but a recent OIG audit has uncovered several negative aspects (OIG, 2014).

The literature reviews below are categorized to first describe what the real threat is to America. Establishing the threat illustrates the need for a thorough detection program at the border that combined with agents on the ground prevents drugs, sex workers, and terrorists from being trafficked into the United States.

The U.S. has populated areas of the border where there is high cartel activity, but there are remote, uninhabited stretches of the border that are not patrolled by border agents on the ground (Steinmetz, 2011). This establishes a great need for fast moving aerial surveillance combined with ground sensors to cover these remote areas that ground agents don’t go to unless cued by a sensor to activity in a particular area.

Each research article will be assessed to determine its credibility, reliability, and impact on the field of Strategic Security. The articles will be organized in two categories: existing threats at the border and the aerial surveillance program of the CBP. Concerning the Predator surveillance program, several of the reference articles were drawn from the open web and other professional sources.

**References for Border Threats**

Credibility: According to the Aljazeera America site, their coverage of American news is “unbiased, fact-based, and in-depth”. Aljazeera has one of the “largest newsgathering capabilities of any news organization in the United States” with a New York City headquarters, 3 broadcast centers, 12 major city bureaus in America, and 800 journalists and staff.

Reliability: The journalist who wrote this article, Musa Al-Gharbi, is an instructor at the University of Arizona in the department of government and public service. He is also affiliated with the Southwest Initiative for the Study of Middle East Conflicts.

Impact on Strategic Security: This article is particularly striking as the writer boldly emphasizes that Mexican drug cartels are far more of a threat than Middle Eastern terrorist groups such as ISIL. He gives numbers and facts concerning atrocities committed by Islamic terrorist groups versus drug cartels and demonstrates that cartels are a greater threat to the United States. This is an important point for Strategic Security because its focus should be according to the actual level of threat from different areas around the world and not on what has been trumped up through perception or bias.


Credibility: The *LA Times* is the largest metropolitan daily newspaper in the United States with a readership of 1.5 million daily and 2.5 million on Sunday. The Pulitzer Prize winning *LA Times* has a combined print and online weekly audience of 4.1 million and has been covering Southern California for over a 132 years.
Reliability: Richard Marosi is an LA Times staff writer who reviewed hundreds of records for this article including phone surveillance, court testimony transcripts, probable cause affidavits, and DEA investigation reports. He also interviewed two convicted cartel operatives as well as DEA agents, prosecutors, and other law enforcement officers to put together this insightful article that really gets into the details of how drugs get smuggled.

Impact on Strategic Security: This article illuminates the inner details of how a drug shipment makes it through a southwest border POE and then on to a stash house. From there he explains in detail how the shipment is hidden in and transported by either a tractor trailer rig or a small plane across the United States. This is article provides a crystal clear look at the inner workings of drug cartel logistics. One thing mentioned that is that after a load car carrying a hidden drug shipment makes it successfully through a border POE, the vehicle will meet up with the stash house operator vehicle in a public place not far from the POE to exchange the shipment between vehicles.


Credibility: Foreign Policy magazine is known as one of the most credible names in global affairs and international politics with 3.5 million online monthly readers. Foreign Policy provides the best available examination of global challenges by leading experts from around the world.
Reliability: Evelyn K. Morris is an International Security Program fellow at the Belfer Center for Science and International Affairs at the John F. Kennedy School of Government, Harvard University.

Impact on Strategic Security: This article provides important information about cartel crime statistics, cartel logistics such as tunnels under the border, diversification of cartel income sources, cartel violence at the southwest border being over control of smuggling routes and not customers, and details about cartel violence in America. For example, the article talks about Chicago being a key hub for cartel distribution, and the city’s DEA agent in charge attributes the city’s well-publicized high murder rate to narcotic related turf wars. The article mentions that Chicago’s proximity to air, rail, and road networks as well as its large Mexican immigrant community are factors that make Chicago a key distribution point for cartels particularly Sinaloa.


Credibility: This is a scholarly peer reviewed paper obtained from the Henley Putnam library’s International Security and Counterterrorism Reference Center. The paper is an issue of the academic journal Global Security Studies from the summer of 2014.

Reliability: This paper is written by Emma Zarriello of the Department of War, Peace, and Defense of the University of North Carolina at Chapel Hill as well as David Gray of Campbell University.
Impact on Strategic Security: This work talks about how cartel violence skyrockets every time US and Mexican government forces crack down on cartels removing a cartel leader with the highest violence rates being in Mexican states that border the United States. This contributes to spillover violence into the U.S and while America focuses mainly on the Columbian security threat, Mexican cartels are a much more serious and closer concern. It also talks about cartel’s methods for corruption of both Mexican and U.S. officials. One of the more important points this work makes is that the U.S. is focused on border security efforts to interdict drug smugglers illegally crossing the border while 70% of illegal drugs enter the United States right through official points of entry hidden inside of legal loads carried on tractor trailer rigs only a fraction of which are inspected. It also mentions viable ways of affecting drug cartels such as focusing on capturing their cash profits and disrupting their technological sophistication through cyber-warfare.


Credibility: The New York Times is an American daily newspaper that has been published in New York City since 1851 by The New York Times Company. It has won 114 Pulitzer Prizes which is more than any other news organization. The print version is the largest in the United States, the second largest paper overall with The Wall Street Journal being #1, and ranked 39th in the world by circulation according to the Associated Press and International Federation of Audit Bureaux of Circulations.
Reliability: Eduardo Porter writes the Economic Scene for the New York Times and is a member of the Times editorial board. He started a journalism career two decades ago at a news agency in Mexico City eventually working in Sao Paulo, Brazil as an editor. In 2000, we worked for the WSJ in Los Angeles covering the Hispanic population. Thus, he has done significant work in and around key drug cartel areas of operation for many years. Based on experience then, his information in this article is reliable.

Impact on Strategic Security: This article provides excellent information regarding the real cost of the drug war to America with specific regard to the billions spent on the war annually, the thousands killed by drug-related violence, and the millions of Americans in prison due to drug violations. Once a drug offender has a criminal record it becomes difficult to acquire a job, rent an apartment, and even get a credit card due to the stigma of a criminal record brought on by a drug charge. These are powerful examples of the real threat that drugs are to American society affecting millions of Americans every day.


Credibility: This is a blog post on the CNN World news website by a special to CNN, Ted Galen Carpenter. CNN is a well renowned, major source of news from around the world with proper vetting of its sources.

Reliability: Ted Galen Carpenter is a senior fellow at the Cato Institute who has written nine books on international affairs that include The Fire Next Door: Mexico’s Drug Violence and the
"Danger to America. The fact that he is a senior fellow, a special to CNN, and has published nine books including one that directly covers Mexican drug cartels makes this source reliable.

Impact on Strategic Security: This article covers a key example of the threat to America from drug cartels. It talks about how cartels have taken control of major chunks of Central America which has made honest employment dangerous for the youth and the poor living in that area. This caused a recent refugee crisis at the southwest border that has been a momentous, unexpected strain on federal agency personnel and budgets. The article also gets into how the cartels press the youth into carrying drugs to the U.S. for them, and how the refugee crisis diverted the U.S. border patrol’s attention making it easier for drug smugglers to cross the border undetected.


Credibility: This is a scholarly peer reviewed article found in Henley Putnam library’s International Security and Counterterrorism Reference Center. It is an August, 2011 issue in the Journal of Strategic Security.

Reliability: Todd Steinmetz has an MS in Terrorism and Counterterrorism Studies from Henley-Putnam University. He is a Homeland Security Analyst at Information and Infrastructure Technologies which is a subsidiary of Electronic Warfare Associates (EWA) in Herndon, Virginia. In his role there, he has published daily open-source analyses of Mexico’s drug war as well as Texas border security operations. He has also coordinated the collection of intelligence
from more than eighty law enforcement agencies. Based on education and experience, this source article is reliable.

**Impact on Strategic Security:** This article provides critical information concerning terrorist activity at the border as well as that of transnational criminal organizations (TCOs). It mentions the cartels use of sophisticated technology, weapons, and the corruption of public officials to conduct their business. It covers the significant violence occurring in Mexican states that border the United States particularly in Ciudad Juarez across the border from El Paso, Texas. Ciudad Juarez is considered the most violent place in the western hemisphere. It mentions assaults on U.S. security officials such as border patrol agents as well as cartel logistics for smuggling across the border. It covers cartel connections to gangs in the United States and the threat of terrorists being smuggled by cartels. It also mentions that the U.S. border is 8,607 miles and DHS effectively controls only part of it. Towards the end, the article gives some useful information about effective border security measures such as UAVs and Mega Blimps.


**Credibility:** *The Washington Times* is a leading online site in America for hard-hitting news and conservative commentary from the nation’s capital written by award winning and respected journalists as well as experts in the field. *The Washington Times* covers such areas as national security news, investigative reporting, and in-depth national political coverage.
Reliability: Kelly Riddell is an investigative reporter for The Washington Times. She has a Bachelor’s degree in government and a Master’s degree from Northwestern University’s School of Journalism. Before joining The Times, she was a reporter for Bloomberg News for six years based in Washington D.C. Given that The Washington Times is a major newspaper in the United States, that Riddell is well educated, and that she has significant journalism experience, this article is reliable.

Impact on Strategic Security: This article provides the perspective of sheriffs and law enforcement around America that are alarmed by drug cartel activity in their jurisdictions far from the southwest border. It mentions that cartels have more firepower than local law enforcement agencies have and are sophisticated in their use of technology to carry out criminal activity such as digital money laundering. A sheriff makes a key point that we have to know who’s coming in and going out of the country across the border.


Credibility: Breitbart.com is a news site with conservative views founded in 2007 that engages in analysis, commentary, and breaking news.

Reliability: Breitbart started significant expansion in 2014 with the addition of Texas and London based and planned additions in Florida, California, Egypt, and Jerusalem.
Impact on Strategic Security: This article provides important information about Hezbollah, the main terrorist threat in South America that border security and surveillance needs to be concerned with.


Credibility Founded in 1985 by Dr Ted Baehr, a graduate of Dartmouth College and former president of the Episcopal Radio & Television Foundation.

Reliability: MovieGuide is affiliated with the Christian Film & Television Foundation and broadcast in more than 200 countries.

Impact on Strategic Security: This article provides a plot summary for the movie "The Counselor" which depicts a drug shipment hidden inside the sewage of a septic tank truck.

References for Predator Surveillance Program

Credibility: Congress enacted the Inspector General Act of 1978 to ensure efficiency and integrity in government. The Office of Inspector General (OIG) and DHS were created by Congress in 2002. The OIG conducts independent audits of DHS programs to make recommendations for DHS to carry out its mission in the most effective, economical, and efficient manner attainable. The OIG seeks to prevent fraud and waste of taxpayer funds.

Reliability: In FY2013, the OIG questioned $907,400,236 worth of costs putting $148,066,558 to better use. The OIG also achieved 144 audit reports and processed 16,281 Hotline complaints. The OIG closed 760 investigations resulting in 36 personnel actions.

Impact on Strategic Security: This report which came out December 24, 2014 was discovered much later in the research for this thesis and is an absolute treasure trove of invaluable information that presents the real facts concerning the CBP’s Predator surveillance program. The timing of it, coming out in late 2014 is what helps to present a balanced evaluation of the program covering both the pros and the cons and providing suggestions.


Credibility: The *LA Times* is the largest metropolitan daily newspaper in the United States with a readership of 1.5 million daily and 2.5 million on Sunday. The Pulitzer Prize winning *LA Times* has a combined print and online weekly audience of 4.1 million and has been covering Southern California for over a 132 years.
Reliability: Lisa Mascaro covers Congress in D.C. for the *LA Times* and writes about U.S. policy, economics, and political culture. She grew up in L.A. and has reported across Southern California, edited, and worked in Texas. While she was the Washington correspondent for the Las Vegas Sun, the paper won the Pulitzer Prize for Public Service. She graduated in economics and political science from UC Santa Barbara. Brian Bennett covers homeland security and immigration for the *LA Times* in Washington, D.C. He started with Time magazine as a reporter in Hong Kong in 2000 and was bureau chief for the *Times* in Baghdad, 2003-2004.

Impact on Strategic Security: This is a recent article from July of this year indicating that the Predator surveillance program is at risk of being grounded due to lack of funding resulting from the recent refugee crisis. It mentions funds being shifted around between federal agencies and gives some details about the refugee crisis. This is key information for the thesis the purpose accurately evaluate the Predator surveillance program. If the program gets grounded that would negate the effectiveness altogether, an important thing to know.


Credibility: The *LA Times* is the largest metropolitan daily newspaper in the United States with a readership of 1.5 million daily and 2.5 million on Sunday. The Pulitzer Prize winning *LA Times* has a combined print and online weekly audience of 4.1 million and has been covering Southern California for over a 132 years.
Reliability: Brian Bennett covers homeland security and immigration for the LA Times in Washington, D.C. He started with Time magazine as a reporter in Hong Kong in 2000 and was bureau chief for the Times in Baghdad, 2003-2004.

Impact on Strategic Security: This article gives the details of an incident that occurred in North Dakota where local law enforcement enlisted the aid of a Border Patrol Predator in handling a situation. It gives great insight into how a Predator is used to assist law enforcement in tracking individuals. In this particular situation the Predator was circling 2 miles high up and gave law enforcement clear footage of the suspects’ location and movement on the farm. This greatly assisted the effectiveness of their response to the situation. The article also mentions how the Predators are a key asset to have around for an emergency crisis as well as for use by other law enforcement agencies such as DEA and FBI.


Credibility: The Congressional Research Service (CRS) serves congressional committees and Members of Congress. CRS provides expert assistance at every stage of the legislative process. Congress depends on CRS for interdisciplinary resources as well as critical, innovative examination of issues to help legislators form sound policies and make decisions on difficult issues.

Reliability: The authors of this work are Chad C. Haddal and Jeremiah Gertler. Chad is a specialist in Immigration Policy while Jeremiah is a specialist in Military Aviation.
Impact on Strategic Security: This article provides a trove of information concerning the Border Patrol’s Predator surveillance program starting off with a lengthy discussion of both the benefits and limitations of the program. This information is important for making assessment of the program. For some examples: the Predator can fly as high as 50,000 feet while identifying objects the size of a milk carton with an EO sensor, a Predator has flight endurance of 27 hours which dwarfs that of any helicopter or manned aircraft, and a Predator’s powerful sensors detect people hiding inside of dense brush typical at the border. The cost versus benefits details between Predators and manned aircraft are complicated. There is also information about coordination with agents on the ground and other effectiveness details.


**Credibility:** The Christian Science Monitor (CSM) offers independent international news that focuses on thoughtful, global coverage. Today, mainstream media tends to narrow its focus, but CSM is convinced readers want the opposite. CSM is both unrelenting and fair offering multiple perspectives with in depth analysis. CSM has won 7 Pulitzer prizes and over a dozen Overseas Press Club awards.

**Reliability:** Elliot Spagat is a San Diego correspondent for the Associated Press. Brian Skoloff is a writer and video journalist for the AP in Phoenix.

**Impact on Strategic Security:** This article mentions how the U.S. does not control all of the border but is using Predators to cover the remote, desolated stretches of border with a technique known as ‘change detection’ imagery. If changes are detected such as vehicle tracks in a remote
area, then agents are sent to that remote area to check things out. The Border Patrol then does not waste manpower where there is no activity occurring.


**Credibility:** The Cronkite Borderlands Initiative is a project headed by Rick Rodriguez who is the Carnegie Professor of Journalism at the Cronkite School and Jason Manning who is the director of student media at ASU and a member of the Cronkite School faculty.

**Reliability:** Trahern Jones was a graduate journalism student under the Mayo-Cronkite fellowship program who finished his M.M.C. in the summer of 2013.

**Impact on Strategic Security:** This article provides some good information about the costs of Predators as well as some limitations in their capability due to weather and safety issues. It also covers some of the great advantages of Predators one of which is their long endurance and ability to cover “many miles of uninhabited deserts, rivers, and forests”. The article gets into how Predators coordinate with agents on the ground and that agents are thrilled to have them overhead. When agents get disoriented or lost in the brush, a Predator finds them easily which is compared to the agent trying to give directions to his buddies.

Credibility: Founded in 1923, Time Magazine is one of the most informative and authoritative guides on world events.

Reliability: There are 2 million weekly readers that include affluent persons and senior business personnel.

Impact on Strategic Security: This article provides cost per hour figures for different aircraft that are important for cost comparison.


Credibility: Sikorsky Aircraft Corporation is a world leader in the design and production of helicopters.

Reliability: Established in 1925, Sikorsky helicopters have saved 2 million lives since 1944 with one of its most famous helicopters being the UH-60 BlackHawk.

Impact on Strategic Security: This site gives performance characteristics for helicopters used to compare against the Predator drone.


Credibility: Minnesota Public Radio is one of America's premiere radio stations serving nearly all of Minnesota reaching 900,000 listeners each week.
Reliability: Started in 1967, MPR has earned nearly 1,000 broadcasting as well as journalism awards.

Impact on Strategic Security: This article provides the views of CBP leadership on the Predator surveillance program.

Conclusions and Recommendations

My research up to this point has clearly established the threat to America from drug cartels along with the threat of terrorist infiltration. Billions in annual profits are a strong impetus for using imaginative methods and routes to avoid law enforcement to get their product across the southwest border (Morris, 2013). Extensive funds provide cartels with heavy duty weaponry and technology that is used to enforce smuggling routes which are of utmost value and are what the well-publicized drug wars in Mexico are fought over (Morris, 2013). Cartels also use their billions frequently to bribe Mexican and U.S. officials to further facilitate their purposes (Morris, 2013).

This is only helped by the fact that there is a significant and incessant demand for drugs in the United States. Even though many Americans enjoy the highs of their product, there are serious consequences resulting. For example, millions of Americans are in prison on drug violations even for minor violations such as possessing a small amount of marijuana (Porter, 2012). Once a U.S. citizen has a criminal record even from a minor drug violation, they have great difficulty in getting a job, renting an apartment, or even getting a credit card (Porter, 2012). With today’s noticeably higher cost of living, the ability to acquire good employment is critical. When one can’t get good employment legitimately, it is easy to envision a scenario of
that person turning back to more crime. The violence and criminal activity in America resulting from drug activity is a significant issue. Human trafficking of sex workers into America, and the possibility of terrorist infiltration using established smuggling routes are also serious considerations.

Predators provide several advantages to U.S. authorities: they overfly rough terrain with powerful sensors in minutes that would take agents on the ground hours to cover; they cover remote and uncontrolled sections of the border cueing agents upon spotting activity; they have much greater endurance time than manned aircraft; and they are used to provide superior overhead intelligence in other events such as natural disasters, police standoffs, etc. (Haddal & Gertler, 2010).

Research so far has failed to reveal several actual stories of where Predators have been used in a live situation for surveillance intelligence to resolve it. A lot of good general performance data and information has been found but with only one story about a Predator being used for a North Dakota police standoff.

Overall conclusions about the Predator surveillance program are that it is a needed asset to America not just for border surveillance but also to have on hand for other serious events such as floods, post hurricane search and rescue, large forest fires, police standoffs, and even a terrorist attack on the homeland (Bennett, 2011). It is of enormous value to have powerful surveillance overhead in minutes when any of these events occur (Bennett, 2011). In these situations, ascertaining the location of someone stranded or of a terrorist on the run escaping into a wilderness area is achieved readily by a Predator. The RPA gives exact location to authorities using GPS technology which provides much needed advantage to U.S. forces that respond.
Another important service Predators provide is patrolling remote sections of the border that are not controlled or monitored by DHS (Steinmetz, 2011). These sections have to be watched because these are the very places where new smuggling routes would be established or terrorists may look to infiltrate (Steinmetz, 2011). Plus, the combination of Predators overhead with agents on the ground covering busy sections of the border is many times more effective than just using agents on the ground.

However, the Predator surveillance program currently has some significant negative issues that have to be remedied. There are also alternatives such as manned surveillance aircraft, ground surveillance, and ground sensors that could be used (OIG, 2014).

Chapter 3
Methodology

This research discusses current threats at the U.S. southwest border today such as drug smuggling, human trafficking, and terrorist operatives. Once the threat is illuminated, then an assessment of the Customs and Border Protection (CBP) remotely piloted aircraft (RPA) surveillance program will be made to determine its effectiveness in monitoring the southwest border to address the threat. To accomplish these two tasks, extensive research was conducted both in the HPU Library resource databases as well as on the open web. The findings of this research are intriguing regarding the actual threat at the border today and the Predator surveillance aircraft which has powerful sensors and the ability to cover hundreds of miles of border quickly.
This research is based on sources of information from subject matter experts, HPU Library source articles, major newspaper articles such as New York Times and LA Times, government reports, reporters who have operated on the southwest border and in South America, and security journals. Articles specifically regarding the following points were searched to develop background on the subject: (a) the current threat from drug cartel smuggling and violence including the infiltration of terrorists through established smuggling routes (b) the Predator-B platform and its capabilities, (c) how these capabilities protect the border to prevent threats from entering the United States, (d) any limitations regarding the use of Predator surveillance at the border, and (e) what can be done to improve surveillance and detection at the border.

Information was retrieved from these sources to first reveal what and where the threat is along the border which determines the surveillance capability necessary and where it should conduct surveillance. The focus of the Thesis, the Predator surveillance program, was looked at in three main areas: the capabilities, the limitations, and suggestions for improvement. The expected limitations of the research were that since Predator-B platforms have only recently begun to be used to monitor the border, little information would be available for a researcher to make an assessment. Any current knowledge of the program was examined to reinterpret it in a new way if possible or recognize a new aspect.

Chapter 4
Data Analysis
**Threats at the Border**

A salient concern of U.S. security officials today, at least according to media hype, are Islamic terrorist groups such as ISIS (Al-Gharbi, 2014). Western commentators interpret ISIS’s acts of barbarism such as the beheading of journalists as unique to Islamic terrorism. But while American policymakers and media are focused on Islamic terrorists, there exists a more significant threat closer to the homeland. Mexican drug cartels are ruthless in the conduct of their business particularly in the protection of smuggling routes (Al-Gharbi, 2014).

**Drug Cartels**

An Aljazeera article from October, 2014 stated that around 9,000 civilians had been killed in Iraq in 2014 and more than half of these killings were since ISIS fighters had seized large swathes of northern Iraq (Al-Gharbi, 2014). However, drug cartels killed 16,000 Mexican civilians in 2013 alone and an additional 60,000 from 2006 to 2012. It is important to understand that these numbers are only estimates given by the Mexican government which is known to underreport these figures by half (Al-Gharbi, 2014). Of particular concern to the United States, cartels killed 293 Americans in Mexico from 2007 to 2010 and conducted numerous attacks on U.S. consulates (Al-Gharbi, 2014).

However, cartel violence does not just occur on the Mexican side of the border. From 2006 to 2010 around 5,700 Americans were killed by drug violence in America (Al-Gharbi, 2014). This is more than the 2,937 Americans killed in the Sept. 11th attacks. It is also more than the 2,349 Americans killed in Afghanistan and 4,487 killed in Iraq in the past decade. Thus, in the span of four years, cartels have killed more Americans than in the 9/11 attacks or the decade long wars in the Middle East (Al-Gharbi, 2014).
It is important to note that the brutality of cartels cannot be fully evinced by statistics alone. In the summer of 2014, ISIS carried out individual beheadings of journalists. In stark comparison, Mexican cartels are known to conduct hundreds of beheadings each year, dismember bodies, and display mass piles of bodies in prominent public places (Al-Gharbi, 2014). Westerners were outraged when ISIS kidnapped 1,500 Yazidi women to commit sexual atrocities against them. By contrast, cartels kidnap tens of thousands of children annually to use as drug mules or sex slaves with a recent 2014 example in which 43 students were kidnapped near a college in the town of Iguala by a cartel in response to student protests (Al-Gharbi, 2014). These facts make clear the importance of proficient surveillance and security at the American southwest border.

Terrorists

The other main security issue at the border is the possibility of terrorist infiltration. Experts at the National Defense University (NDU) state that the Iranian backed Narco-terrorist group Hezbollah has expanded across Latin America and into the United States (Mora, 2015). Hezbollah generates millions of dollars through drug trafficking, money laundering, and other criminal activities. CBP agents have apprehended at least 474 aliens from terrorism linked countries attempting to sneak across the border (Mora, 2015). Dr. David Asher, an adjunct senior fellow at the center for New American Security, considers Hezbollah to be one of the largest exporters of illegal drugs from South America and probably the world's largest money laundering organization (Mora, 2015). This is another example of the importance of border surveillance and security.
Advantages Provided By Predators

The Office of Inspector General (OIG) conducted a recent December, 2014 audit of CBP’s Predator border surveillance program. For this audit, the OIG obtained information from a variety of sources that included CBP’s Office of Air and Marine (OAM) that operates the RPA program, site visits to multiple CBP airbases, interviews with CBP ground agents in Arizona and Texas, interviews with CBP’s Office of Intelligence and Investigative Liaison (OIIL), RPA flight data, and several others (OIG, 2014). This is a good indicator that the OIG conducted a thorough and accurate audit based on multiple sources with the right access.

Characteristics

At the time of the OIG audit which was late 2014, the CBP had 10 Predator RPA with five for land duty, two for sea duty, and three for both (OIG, 2014). The Predator has a 20 hour flight endurance time, 276 mph top speed, 50,000 foot altitude ceiling, and carries 3,800 lbs. of equipment (OIG, 2014). The Predators are a valuable asset to have on hand not just for border surveillance but also to respond to a major event anywhere in the United States. The Predator provides first responders to such an event with real time imagery and overhead intelligence that has been used in other places like Afghanistan.

In the case of border surveillance, Predators provide ground agents with real time GPS location of illegal border crossers and surveillance of intelligence targets (OIG, 2014). The powerful electro-optical (EO) camera is sophisticated enough to identify objects the size of a milk carton from several miles up, out of auditory range. (Haddal & Gertler, 2010). Predators provide imagery day and night of people, vehicles, and buildings.
SAR and VADER

Some of CBP’s Predators carry the VADER radar sensor (OIG, 2014). VADER’s purpose is to provide detection, classification, and tactical cueing in a geographic area to increase interdictions of illegal border crossers. The VADER sensor allows CBP to determine surveillance gaps along the border (OIG, 2014).

Some CBP Predators also carry Synthetic Aperture Radar (SAR) which provides change detection imagery that shows tire tracks or footprints in areas where previous imagery showed no activity (OIG, 2014). This means that Predators sweep an area with precision imagery that picks up footprints or tire tracks and then come back several days later for another imagery sweep. The two videos are then overlaid by analysts who use software to detect small changes in the imagery indicating activity in the area (Spagat & Skoloff, 2014). About 92% of these change detection missions show no changes in the terrain of a remote area, but when activity is detected, ground agents are dispatched often by helicopter to these remote areas (Spagat & Skoloff, 2014). The change detection flights currently cover only 900 miles of border, much of it in Texas (Spagat & Skoloff, 2014).

Speed and Endurance

Predators provide useful information for agents on the ground in murky situations or in hard to reach areas (Jones, 2013). Predators arrive on scene to an active location in five or ten minutes whereas ground agents would take an hour and a half (Jones, 2013). The Predator’s camera is capable of zooming in to get street names from many thousands of feet and while BP manned aircraft such as helicopters have cameras with this same capability, the Predator’s much longer flight endurance provides extended surveillance for situations on the ground (Jones,
The Predator can remain on station for twenty hours non-stop which is far longer than any manned aircraft (Bennett, 2011). A typical helicopter has a flight endurance of just over two hours (Haddal & Gertler, 2010). When a ground agent gets disoriented and lost in the bush, it is hard for him to tell others on the radio where he is, but a Predator locates the agent and gets a GPS fix. In recent years, drug smugglers have rammed CBP vehicles or spiked the tires, but the Predator has the capability to follow an escaping smuggler vehicle for hours through any terrain (Jones, 2013).

Multiple Uses

CBP Predators have proven their value on numerous occasions when CBP lent them out to FEMA, FBI, and other DHS components (OIG, 2014). For example, CBP lent out a Predator to a sheriff in North Dakota involved in a standoff with three suspects on a 3,000 acre property (Bennett, 2011). The Predator arrived on scene at an altitude of two miles up and provided pinpoint location and real time imagery of the suspects for the sheriff to successfully end the standoff (Bennett, 2011). CBP states that Predators have contributed significantly to successfully investigating, dismantling, and disrupting criminal organizations (OIG, 2014). CBP goes on to state that Predators have collected on many intelligence targets as well (OIG, 2014).

Negative Issues Affecting the Program (FY2013)

In going through the following deficiencies with the Predator program, what the OIG found and recommended will be summarized along with CBP’s counter-response to the OIG. The author will then make any suggestions available for improvement in the efficiency of the program.
No Measures of Performance

The OIG audit discovered that the CBP cannot determine the effectiveness of the remotely piloted aircraft program because it has not developed measures of performance (OIG, 2014). One of OIG’s recommendations to CBP from the audit is to revise its CONOPs to have verifiable performance measures. CBP’s response to the OIG is that it has already begun revising its CONOPs to include performance measures with an estimated completion for this change of 3/31/15 (OIG, 2014). The OIG’s counter-response is that CBP should have metrics that 1) measure the RPA program’s impact on border security and 2) measure the RPA program’s return on investment or cost effectiveness (OIG, 2014). The aforementioned two measures of performance are crucial for CBP to make sound decisions about the program. The first measure determines how well the aircraft are augmenting border security, and the second measure determines the cost to benefit ratio for the Predator aircraft. The CBP can compare this to the ratio for other border surveillance equipment such as manned aircraft or ground surveillance assets. Therefore, the CBP should have a separate department that probably doesn’t require many personnel to track and evaluate these two metrics for the Predator surveillance program. This team will keep track of these metrics for other surveillance assets as well to maintain awareness of when it is time to invest in other surveillance assets or continue using Predators.

Cost of the Predator Program

The OIG audit determined that in FY2013 the RPA program cost the CBP $12,255/hour. CBP disagreed with this figure claiming that the program only costs $2,468/hour (OIG, 2014). The OIG audit included all costs associated with the program in its figures whereas the CBP does not include costs for such items as personnel, depreciation, equipment, and overhead which
represent 80% of the total costs (OIG, 2014). For FY2013, CBP did not include the following costs (approximate values):

Table 1. Costs CBP Does Not Include in its Metrics

<table>
<thead>
<tr>
<th>ITEMS NOT INCLUDED IN CBP COST FIGURES</th>
<th>COST</th>
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<tbody>
<tr>
<td>Full/Part Time Personnel (such as pilots)</td>
<td>$11 million</td>
</tr>
<tr>
<td>USCG Support</td>
<td>$1.77 million</td>
</tr>
<tr>
<td>CBP Sensor Operators</td>
<td>$1.39 million</td>
</tr>
<tr>
<td>OIIL Personnel</td>
<td>$2.72 million</td>
</tr>
<tr>
<td>Aircraft Depreciation</td>
<td>$7.65 million</td>
</tr>
<tr>
<td>VADER Sensor</td>
<td>$1.7 million</td>
</tr>
<tr>
<td>Operations Support</td>
<td>$5.54 million</td>
</tr>
<tr>
<td>Base Overhead</td>
<td>$2.14 million</td>
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OIG made the observation that because CBP does not include all costs, the cost effectiveness of the program cannot be determined accurately to make informed decisions about expanding the program (OIG, 2014). The CBP disagreed with the dollar amounts for the aforementioned costs. The OIG audit found clear evidence that CBP plans to spend $443 million to buy 14 more Predator aircraft, but OIG recommends reconsideration on this by investing in manned aircraft and ground surveillance assets (OIG, 2014). In its response to the OIG audit however, the CBP states it does not plan any expansion of the program. It will instead invest those funds to expand infrastructure and increase utilization of the existing fleet (OIG, 2014).

The OIG audit found that CBP has invested significant funds in the RPA surveillance program that has not achieved expected results and recommends that CBP include all costs of the program to arrive at effective cost metrics (OIG, 2014). However, CBP disagreed with this stating that it will continue to use its current methodology in computing the RPA program costs which it says meets current Office of Management and Budget (OMB) standards. OIG’s counter-
response to this is that CBP is only accounting for 20% of the total costs of the program which is far from accurate (OIG, 2014).

Another troublesome sign is that CBP states that it does not include the reduction of border surveillance costs as a performance measure for the RPA program (OIG, 2014). When one considers the current national debt status, every federal agency needs to measure cost effectiveness. In fact, the recent refugee crisis from South America has sapped border agency budgets according to a mid-2014 article (Mascaro & Bennett, 2014). With more than 57,000 children having arrived, costs for overtime, detention, and transportation have put a significant strain on the CBP budget (Mascaro & Bennett, 2014). The OIG audit found that in FY2013, CBP included only the following costs in its figures for the Predator surveillance program:

Table 2. Costs the CBP Accounts For

<table>
<thead>
<tr>
<th>COSTS CBP TAKES INTO ACCOUNT</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>$4,880</td>
</tr>
<tr>
<td>Parts</td>
<td>$7.22 million</td>
</tr>
<tr>
<td>Labor</td>
<td>$790,686</td>
</tr>
<tr>
<td>Repairs</td>
<td>$1.44 million</td>
</tr>
<tr>
<td>Fuel</td>
<td>$632,941</td>
</tr>
<tr>
<td>Satellite</td>
<td>$1.95 million</td>
</tr>
</tbody>
</table>

Obviously, the CBP disagrees with a significant portion of the Inspector General’s audit of the program.

It is best to include all costs associated with the program so that truly accurate cost comparisons are made between the different surveillance options at the border which include unmanned aircraft, manned aircraft, and ground surveillance equipment. Once the true costs are known for each option, then the benefits are compared between each option. For example, the
Predator has a much longer endurance time than a helicopter. A cost versus benefit assessment is made for each of the three options to determine the most efficient one to use.

To give an example of cost benefit comparison, the cost per flight hour (CPFH) of a Blackhawk helicopter is approximately $24,475 and for a UH-1 Huey is $13,634 (Thompson, 2013). These are helicopters the Border patrol uses in its fleet. A key benefit of helicopters is their ability to land and pick up a CBP ground agent or a suspect that has been arrested. The disadvantages of helicopters are that they cruise slower at around 173 mph, are relatively loud, are manned meaning pilots are vulnerable to harm, and altitude ceiling is 10,520 feet (Sikorsky, 2015). Flight endurance for a helicopter is typically around two hours (Haddal & Gertler, 2010).

The CPFH for a Predator is $12,275 (OIG, 2014). The Predator as mentioned before cruises at 276 mph, is unmanned meaning no pilot vulnerability, is relatively quiet often remaining out of auditory range, has an altitude ceiling of 50,000 feet, and a flight endurance of 20 hours (OIG, 2014). So the Predator is much more capable than a helicopter except in terms of stopping to land and pick someone up. The Predator also appears to have a lower cost per flight hour.

Low Apprehensions and Flight Hours

OIG found that Predators have not increased apprehensions of illegal border crossers, reduced border surveillance costs, or improved surveillance effectiveness at the border. Compared to CBPs total apprehensions at the border, relatively few resulted from Predator operations (OIG, 2014). The table shows Predator apprehensions vs total apprehensions for FY2013:
Table 3. Border Apprehensions

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>TOTAL APPREHENSIONS</th>
<th>RPA ATTRIBUTABLE APPREHENSIONS</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona – Tuscon</td>
<td>120,939</td>
<td>2,161</td>
<td>1.8 %</td>
</tr>
<tr>
<td>Texas – Rio Grande</td>
<td>154,452</td>
<td>111</td>
<td>.07 %</td>
</tr>
</tbody>
</table>

OIG interviewed CBP ground agents who stated that illegal border crossers would probably have been detected without Predator surveillance by using ground based surveillance assets such as Agent Portable Surveillance Systems, Radar-Camera Towers, Mobile Surveillance Systems, Unattended Ground Sensors (UGS), and ground agents on patrol (OIG, 2014). The OIG expected in its audit to see an increase in apprehensions but found little to no evidence of this. Another table that indicates the Predator’s true performance in apprehensions concerns Predator assisted seizures of marijuana versus total CBP seizures of marijuana on the border:

TABLE 4. Marijuana Shipments Caught

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>TOTAL MARIJUANA SEIZURES (LBS)</th>
<th>RPA ATTRIBUTABLE MARIJUANA SEIZURES (LBS)</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona – Tuscon</td>
<td>1,193,083</td>
<td>16,345</td>
<td>1.37 %</td>
</tr>
<tr>
<td>Texas – Rio Grande</td>
<td>797,249</td>
<td>33,103</td>
<td>4.15 %</td>
</tr>
</tbody>
</table>

though illegal border crossers can be detected using other means besides Predators, in CBP’s response to the audit, it asserts that multiple layers of personnel and technology are used to best achieve border security (OIG, 2014). CBP leadership views the RPA program as a critical asset or layer to border security (OIG, 2014).

A combination of Predators, helicopters, and other fixed wing manned aircraft appears to be most efficient and CBP currently uses a combination of all three types.

Low Number of Flight Hours
CBP did not meet its FY2013 flight hour goals of 16 hours a day, every day of the year. The OIG audit found that CBP’s Predators were only airborne 22% of expected hours for FY2013 (OIG, 2014). Expected hours were 23,296 and actual flight hours attained were 5,102 which is about 80% less than expected, a significant gap. CBP states that the reason for 80% less hours than expected was because of budget constraints, flight restrictions, and inclement weather situations (OIG, 2014).

CBP responded to the OIG audit by stating that it flew the maximum number of hours possible given the funding provided. However, CBP’s policy is to not operate Predators in thunderstorms, high winds, or cloud cover which makes the 16 hour a day operations not attainable, not realistic (OIG, 2014). This conclusion was also reached in the OIG’s 2012 audit of the program. The OIG expected to see an aircraft capable of being airborne for 20 hours which is one of the sought after capabilities of the Predator. Instead, little or no evidence of this was found (OIG, 2014). The OIG recommends that CBP revise its flight hour goals to make them attainable.

It is reasonable to conclude that a significant part of any new funding the CBP gets should be used to increase the number of hours being flown by Predators. This is mainly because one of the strong points of the Predator is the great flight endurance that should be used to advantage. One Predator has the ability to patrol a section of the border for close to an entire day.

**Coverage of Only Part of the Border**

The audit found that Predators do not operate along the entire Southwest border. OIG also discovered that in FY2013 that Predators only operated along a 100 mile section of border in Arizona and a 70 mile section in Texas when they were supposed to cover the entire Southwest
border (OIG, 2014). CBP’s response was that Predator operations focused on sections of the border with the highest priority, but that they have flown along the entire Southwest border from California to the Texas Gulf coast occasionally (OIG, 2014).

There should be Predators scanning every section of the southwest border including Texas, New Mexico, Arizona, and California since drug smugglers or terrorists could attempt to cross illegally at any point along the border. There should be rotating shifts of coverage for Predators along each section of the entire Southwest border.

The apparent issue is whether the U.S. government will allocate the funding to support this. Southwest border surveillance and security should be a top priority for Homeland Security because this is the obvious entrance for drug shipments into the country as well as a likely area where terrorists would enter with weapons.

**VADER Radar Sensor Restriction**

CBP planned to use Predator to operate the VADER radar sensor over the entire Southwest border to detect surveillance gaps, but decided to limit VADER operation in FY2013 to the area around a single border patrol station in Arizona (OIG, 2014). The OIG recommends that CBP remove the limitation of operating the VADER radar sensor over only a single location on the border and operate it along the entire southwest border (OIG, 2014). The CBP said that the geographic limitation on the VADER was due to airspace restrictions. The OIG found that there are airspace restrictions along a portion of the Arizona border and some of the Texas border, but none in New Mexico (OIG, 2014).
Also CBP’s Office of Intelligence and Investigative Liaison (OIIL) receives all the video feeds and intelligence from the VADER sensor. OIG discovered that in FY2013, the OIIL did produce daily reports from VADER operations, but the reports were only mission summaries that did not include intelligence of real value such as common entry points, times of entry, commonly used trails, and places where the border fence has been broken through (OIG, 2014).

CBP in its response to the OIG audit states that earlier restrictions on VADER operations to just Arizona have already been lifted. CBP also disagrees with the OIG on the correct metric to assess VADER performance. OIG used # of apprehensions attributable to VADER, but CBP says a better measure of VADER performance is # of detections (OIG, 2014). VADER detected 18,239 illegal border crossers in FY2013 versus only 2,172 attributable apprehensions. The Predator aircraft carrying VADER radar are only credited with an apprehension if the aircraft stays on scene to verify the apprehension which CBP says is not efficient use (OIG, 2014). In other words, it is better for the VADER to move on to another location after a detection than to stick around for the capture. CBP said that the # of detections proves that VADER gave good situational awareness on the border in FY2013 (OIG, 2014).

Using number of detections as a metric for VADER performance is reasonable because a Predator carrying a VADER sensor should move on to seek out other detections after ground agents have been cued successfully to the location to maximize detections by the VADER. The only situation where this is not the case is when the Predator carrying the VADER radar has to stay on scene because the vehicle or person escaped ground agents and has to be followed by the Predator.
The CBP stated in its response to the OIG that restriction on the coverage of VADER to Arizona has already been removed. VADER should scan along the entire Southwest border to detect surveillance gaps which is crucial information used to shore up security in those areas.

Chapter 5
Conclusion

Layers of Security

The research reveals that effective border security is achieved by using several layers of security and surveillance. Predators are one layer of security that if funded properly to achieve appropriate flight hours and coverage will contribute greatly to the mission. They cue ground agents and helicopters where to make arrests or which areas to focus more patrols on. The CBP combines this activity with intelligence from ground surveillance equipment such as unattended ground sensors. This multilayer approach is most effective according to CBP.

CBP indicated a lack of funding in FY2013 as the reason why Predators did not get anywhere near the flight time they were supposed to, flying only 20% of expected hours which is a dramatic shortfall that led to deficient performance numbers discovered by the audit (OIG, 2014). These numbers have not so much to do with the Predator's capability but rather the lack of flight time and thorough application along the entire border.

Views of CBP Leaders

The Predators are part of a system of security. The man in charge of all CBP air operations, assistant CBP commissioner Texas Alles, states, "The Predator is not going to be the end-all, be-all for border security. It's a piece of a larger system" (Gunderson, 2015).
Raterman, Director of CBP Air Operations at CBP’s base in Grand Forks, ND adds that the Predator's radar tracks people and vehicles moving over a wide area and shows where new footprints and tire tracks are that weren't there before (Gunderson, 2015).

**Predators: A Valuable Asset**

These aircraft are invaluable for America to have on hand in case of a natural disaster, terrorist attack, and other dangers to the homeland. The overhead intelligence they provide in such situations contributes greatly to successful resolution by first responders. CBP Predators have been in high demand by multiple government agencies other than CBP.

Ultimately, one considers the numerous situations that occur day and night in which the Border Patrol is chasing illegals through the desert and bush near the border. In these situations, a Predator, if on the scene, is efficient because it detects the precise location of both the agents and the suspects up to a maximum 20 hours straight which is far longer than most situations reasonably last. A Predator easily tracks an escaping vehicle or smuggler when they lose agents on the ground. This is a capability that will be fully evinced if the U.S. Government decides to provide sufficient funding.
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