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Staffing for Unmanned Aircraft Systems (UAS) Operations

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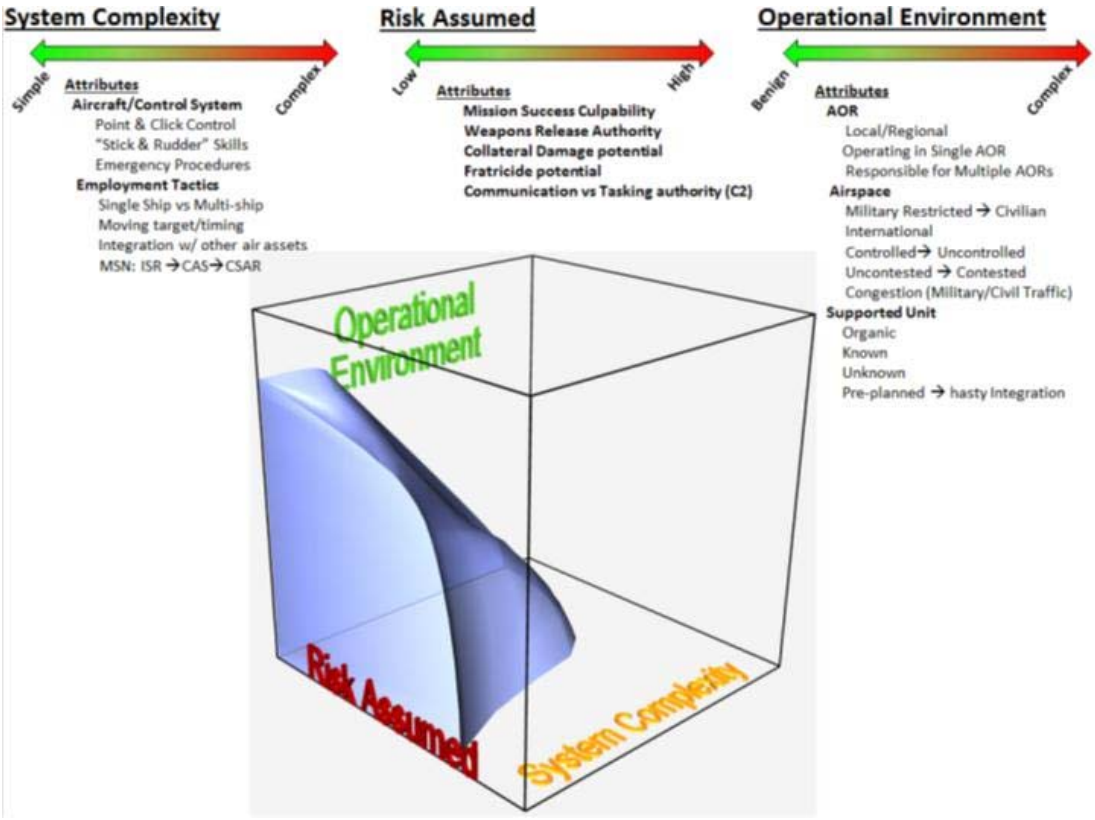
Executive Summary

Within the last two decades, Unmanned Aircraft Systems (UAS) have undergone tremendous development and have become an integral part of joint military operations. Based on the unique capabilities and force multiplying effects of the UAS, each military Service has applied them across the spectrum of military operations. With the rapid development and adoption of this technology, a lack of an overall unifying effort to synchronize programs has led to several Service-unique staffing methodologies across the UAS enterprise. In turn, this has led to several manpower challenges across the Department of Defense's (DoD) UAS enterprise, which the department must address immediately if it is to preserve current UAS capability. While addressing these challenges the department must look to the future, as UAS will inevitably increase in both capability and number across the battlespace, a combination for which current staffing principles will prove unsupportable. This paper assesses the DoD's UAS operations to identify commonalities and differences while developing potential alternatives to standardize staffing methodologies where appropriate and maximizing manpower cost savings and mission effectiveness.

This paper analyzes each of the categories of performers available to DoD's UAS enterprise. These performers include not only uniformed military personnel and contractors, but also government service civilians, who are not currently used. Using existing statutory guidance, a framework for analysis is provided to distill mission requirements and identify who is authorized to conduct operations. In some cases, specifically with larger UAS (e.g., MQ-1, MQ-9, RQ/MQ-4), it was discovered that if mission elements are segregated (i.e., launch and recovery, transit, surveillance, weapons employment), opportunities to use a true workforce mix of individuals presents itself. When specifically looking at cost savings, the opportunity to use government service civilians to conduct appropriate mission elements is also available. This opportunity, in turn, decreases uniformed military personnel requirements and enables them to focus on combat-specific elements.

A common point raised when assessing differences between Service UAS programs was the role of enlisted members vs. officers. Regardless of how manpower costs are calculated, using an enlisted military member always costs less than using an officer. Similarly, when assessing the officer corps, warrant officers will always cost less than utilizing the "traditional" officers. Addressing concerns associated with this debate, this paper avoids a binary application for categories of performers (i.e., all pilots should be enlisted or officer). Rather, an illustrative model was designed to remove emotion and cultural bias from this discussion and enable an analysis of mission requirements based upon system complexity, risk assumed, and the operational environment (see illustrative

figure on following page). When looking at UAS operations in this way, it is apparent that while manpower efficiencies are available across each of the Service's programs, the individual Services do—and should—maintain some unique staffing methodologies based upon their specific mission requirements.



In assessing where associated manpower efficiencies are available, analysis identified several common "business rules" built upon common lessons learned and associated best practices. Where these business rules did not apply, this paper identifies several observations on the rationale applied to a Service's staffing determination. Using these business rules and observations enabled the follow-on assessment of individual UAS mission elements, thereby identifying potential staffing alternatives for cost analysis, which remained platform agnostic rather focusing on mission requirements.

In total, the greatest manpower cost savings were available through the use of government civilians to conduct non-kinetic UAS operations. Applying a mix of government civilians and uniformed military to the Air Force MQ-1/9 launch and recovery force saves approximately $25.65 million across the Future Years Defense Program (FYDP). If government civilians are integrated into Continental United States (CONUS)-based operations (e.g., to transit the UAS), the Air Force could save another $68.3 million across the FYDP. Although these savings are Air Force unique, they highlight potential savings opportunities within similar sister-Service operations. It is also acknowledged that these

savings are conservative in nature as this paper only analyzed annual savings versus the larger life-cycle costs associated with career development and retention initiatives. This paper suggests an alternative analysis by providing several related areas that are recommended for further research. These areas include additional manpower studies for maintenance and intelligence support personnel associated with UAS operations and the impact associated with the rapid maturation of technology on Service force presentation and staffing methodologies.

While this paper provides preliminary estimates of cost savings, the framework used identifies these potential savings not only in terms of cost, but also as providing an opportunity to decrease the overall requirement for uniformed military personnel. The rapid growth associated with DoD's UAS enterprise, coupled with the combatant commanders' insatiable demand for UAS capabilities, has led each Service to drive aggressively toward fielding these crucial platforms. As this paper shows, now is the time to reassess that growth across the entirety of DoD to capitalize on best practices, integrate efforts, and standardize staffing practices where appropriate. Not only will such efforts improve both current mission effectiveness and cost value of manpower, but they can also address the inevitable challenges faced with this rapidly expanding career field.

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1. Introduction

The purpose of this study is to identify alternative staffing strategies that would enable the Department of Defense's (DoD) to accomplish its Unmanned Aircraft System (UAS)-related missions in a more cost-effective way. This paper will analyze DoD's mission requirements against the individual Service's approach to UAS staffing and will identify common practices and differences. After gaining an understanding of the operational and cultural factors associated with UAS employment, several alternative staffing methodologies will be provided.

A. UAS Definitions

Joint Publication 1-02 lays the foundation by defining a UAS as "an aircraft or balloon that does not carry a human operator and is capable of flight under remote control or autonomous programming."[1] DoD defines a UAS as a "system whose components include the necessary equipment, network, and personnel to control an unmanned aircraft."[2] DoD categorizes UAS based upon weight, operating altitude, and airspeed, as depicted in Figure 1. The Air Force goes one step further and defines Groups 1 through 3 as small unmanned aircraft systems (SUAS) and Groups 4 and 5 as remotely piloted aircraft (RPA).[3] Although there is much debate across the community on the specific terminology, this paper will use the term UAS.[4]

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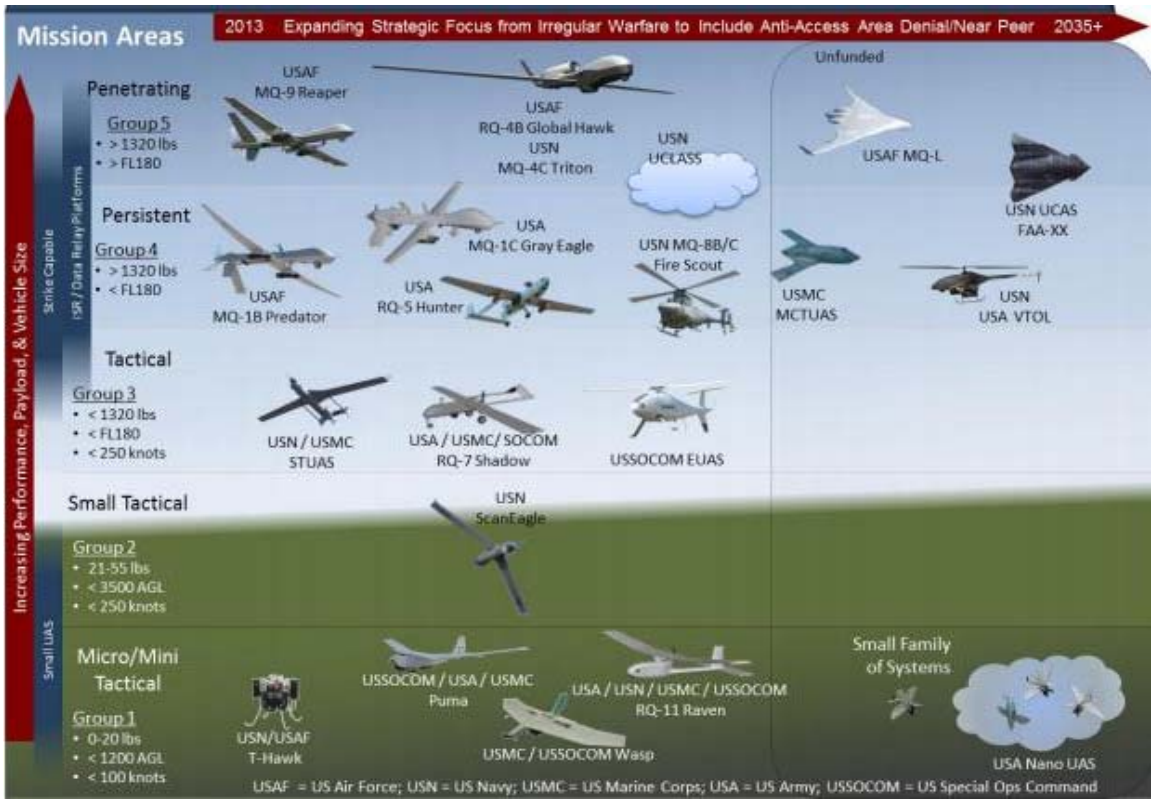
[1] Joint Chiefs of Staff, *Department of Defense Dictionary of Military and Associated Terms*, Joint Publication 1-02 (Washington, DC: Department of Defense, November 2010 (as amended through 31 January 2011)), 388, http://ra.defense.gov/Portals/56/Documents/rtm/jp1_02.pdf.

[2] Department of Defense, *Unmanned Systems Integrated Roadmap FY2013–203*8 (Washington, DC: Office of the Secretary of Defense, 2013), 4, http://www.defense.gov/pubs/DoD-USRM-2013.pdf.

[3] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038* (Washington, DC: Headquarters, United States Air Force, February 17, 2014), 13, http://www.defenseinnovationmarketplace.mil/resources/USAF-RPA_VectorVisionEnablingConcepts2013-2038_ForPublicRelease.pdf.

[4] It is appropriate to note the Chairman of the Joint Chiefs of Staff's comment, "You will never hear me use the word 'drone,' and you will never hear me use the term 'unmanned aerial systems.' Because they are not. They are Remotely Piloted Aircraft" (see Kevin McCaney, "A Drone by Any Other Name Is … an RPA?," *Defense Systems*, May 23, 2014, http://defensesystems.com/articles/2014/05/23/dempsey-rpa-drones-uas.aspx). However, for consistency with the initial tasking of this paper and to stay in line with current documented government publications, this paper will use the term UAS, except when referring directly to the Air Force's aircraft.



Source: Department of Defense, Unmanned Systems Integrated Roadmap FY2013–2038 (Washington, DC: Office of the Secretary of Defense, 2013), 6, http://www.defense.gov/pubs/DoD-USRM-2013.pdf.

Note: Although this grouping is convenient for current missions, technology advances and the expanding growth of UAS employment will blur the lines between the UAS groups. The implications associated with this maturation of technology are not addressed in this paper; however, further research is recommended.

Figure 1. DoD UAS

To set a baseline, the basic components of UAS are as follows:[5]

- An unmanned aircraft (UA) that flies without a person on board. This definition includes fixed-wing, rotary wing, and lighter-than-air vehicles.
- A mechanism for launching and retrieving the UA.
- A ground control station (GCS) to provide the means for a pilot/operator to control the flight of the UA by transmitting signals to it and receiving position, condition, and other telemetry. A communications terminal to receive signals from the UA and relay these signals to the GCS and other selected users.

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[5] U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035* (Fort Rucker, AL: U.S. Army UAS Center of Excellence, n.d.), 8, http://www-rucker.army.mil/usaace/uas/US%20Army%20UAS%20RoadMap%202010%202035.pdf; United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 13.

- A sensor suite installed on the UA to provide data and images to the GCS.
- For armed UA, missiles, bombs, or other munitions and weapons attached to the aircraft and used to strike targets.

B. UAS Missions

The inherent flexibility of aviation, combined with the technological advances in UAS, enable them to facilitate a myriad of military missions. Joint doctrine articulates six specific Joint functions as "related capabilities and activities grouped together to help JFCs [Joint Force Commanders] integrate, synchronize, and direct joint operations."[6] These functions are C2 [command and control], intelligence, fires, movement and maneuver, protection, and sustainment.[7] While traditionally viewed as an Intelligence, Surveillance, and Reconnaissance (ISR) asset, UAS are used by each of the Services across all six Joint functions with mission opportunities continuing to expand as UAS capacity/capability matures. Individual Services, however, label their missions in a manner consistent with their respective charters. Chapters 5 and 6 of this paper analyze these missions and the Services' UAS applications. Through this analysis, the importance behind mission task and level of warfare supported (e.g., tactical, strategic) becomes evident in the overall Services' approach to their staffing methodology.

C. Generic UAS Personnel Requirements

Although each Service has unique operational approaches to its respective UAS programs, generic roles and responsibilities are associated with all current systems. These generic roles and responsibilities are distilled into the following generic personnel requirements:

- **Pilot/operator.** Responsible for controlling the flight of a UAS to include, in the absence of automatic systems, taking off and landing.
- **Sensor operator.** Controls on-board sensors and receives data and images. For many smaller UAS, this role is combined with that of the pilot/operator.
- **Intelligence analyst.** Responsible for the exploitation of the data/signals that the UAS collects. This role also has multiple analyst subsets, including video imagery, all-source intelligence, signals intelligence, and so forth. For larger UAS (Group 4/5), these roles are typically performed by an element of the processing, exploitation, and dissemination (PED) intelligence community.

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[6] Joint Chiefs of Staff, *Joint Operation*, Joint Publication 3-0 (Washington, DC: Department of Defense, 11 August 2011), III-1, http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf.

[7] Ibid.

- **Maintainer.** Responsible for repairing and servicing the UAS and associated equipment within the UAS. Several technicians are associated with this category, including aircraft, control station, payload, weapons, communication, data link, and so forth.

In scoping this study, analysis was not conducted on maintenance or intelligence professionals. Although crucial to the overall UAS operations, this requirement would have been beyond the scope of this study. This study also did not address manning requirements associated with support functions that are provided from either supported units and/or higher headquarters (acquisition, security, transportation, personnel services, and so forth). However, several observations from our analysis are included under recommended areas for further research.

D. Organization and Methodology

This paper has three main components, which cover existing practices and guidance, analysis, and supporting documentation. Chapters 2–4 will address the categories of performers within UAS operations, summarize applicable statutory guidance responsible for manpower decisions, and outline each of the Service's current staffing practices for its UAS program. The next three chapters will focus on the analysis of these data by first defining the baseline of apparent "business rules" used across the Services. Analysis then turns toward identifying the differences between Service staffing methodologies to provide context and to identify opportunities within the enterprise. After looking at current staffing strategies, the individual elements of a UAS mission are analyzed to identify additional opportunities. Finally, this information is combined to outline potential staffing alternatives and provide initial cost analysis to inform decision makers on the need for further research.[8]

While manpower costs associated with staffing methodologies provided the genesis for this paper and hold ever-increasing importance in this era of diminishing budgets, the analysis must acknowledge that this paper deals with a combat-related capability and that the risk to people and missions must be addressed. Analysis was driven by two guiding principles outlined in DoD manpower directives/instructions: "National military objectives shall be accomplished with a minimum of manpower that is organized and employed to provide maximum effectiveness and combat power,"[9] and "Risk mitigation shall take

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[8] Appendices provide greater detail and supporting documentation, as required.

[9] Department of Defense, "Guidance for Manpower Management," DoDD 1100.4 (Washington, DC: USD(P&R), February 12, 2005), 2, http://www.dtic.mil/whs/directives/corres/pdf/110004p.pdf.

precedence over cost savings when necessary to maintain appropriate control of Government operations and missions … and to maintain core capabilities and readiness."[10]

During the research for this paper, a common point raised rested upon a rather binary decision concerning enlisted vs. officers. Regardless of how manpower costs are calculated, if an officer is replaced with an enlisted military member, the program instantly costs less. As Table 1 depicts, when comparing the delta between annual costs, even greater savings can be obtained when civilians are included. Because of this implicit relationship between rank and annual cost, analysis avoids the binary application for category of performers (i.e., all pilots should be enlisted or officer). Rather, work-force staffing methodologies are analyzed based upon a business case analysis that combines variables such as mission risk, authorities, and the determination of inherently governmental (IG) activities.

Table 1. Delta between Rank/Pay Grades Annual Total Cost

	O-4	O-3	W-3	W-2	E-7	E-5
O-3	34,202					
W-3	43,334	9,132				
W-2	60,108	25,906	16,774			
E-7	63,438	29,236	20,104	3,330		
E-5	91,081	56,879	47,747	30,973	27,643	
GS-12	96,049	61,847	52,715	35,941	32,611	4,968
GS-11	114,141	79,939	70,807	54,033	50,703	23,060
GS-7	143,688	109,485	100,354	83,580	80,249	52,607
GS-5	155,550	121,348	112,216	95,442	92,112	64,469

While some of the overall assumptions used—specifically, officer vs. enlisted—may be contentious among the Services, the methodology used in the analysis frames the issues in such a manner that if someone decides to adjust the assumption, the subsequent analysis and methodology remain the same. To provide a standard baseline for calculating costs across staffing methodologies, this analysis used DoD's Cost Assessment and Program Evaluation (CAPE) Full Cost of Manpower (FCoM) tool as directed by Department of Defense Instruction (DoDI) 7041.04.[11] FCoM provides annual costing data only and does

[10] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22 (Washington, DC: USD(P&R), April 12, 2010), 15, http://www.dtic.mil/whs/directives/corres/pdf/110022p.pdf.

[11] Department of Defense, "Estimating and Comparing the Full Costs of Civilian and Active Duty Military Manpower and Contract Support," DoDI 7041.04 (Washington, DC: CAPE, July 3, 2013), 2; "FCoM [Full Cost of Manpower]," accessed October 2, 2014, https://fcom.cape.osd.mil/.

not include the full life-cycle costs associated with individual military occupational specialty/Air Force Specialty Code (MOS/AFSC) training and retention factors.

2. Categories of Performers

When analyzing staffing strategies, it is crucial to first answer the question of who is *authorized* to conduct the desired operations. The first step in this process requires an understanding of which individuals—"categories of performers"—are available. This chapter sets the foundational knowledge by breaking down each category of performer as outlined by U.S. Code (U.S.C.) Title 10 (hereafter referred to as "Title 10"), DoDIs, and/or Department of Defense Directives (DoDDs). For this paper, three primary categories were analyzed: (1) uniformed military personnel, (2) government service civilian (i.e., "GS") and (3) contracted support (i.e., "contractor"). Military personnel include the subcategories of enlisted and officer.[12] A basic understanding is required before Chapter 3's review of statutory guidance and legal constraints to provide a foundation for future analysis. For those intimately familiar with these categories, the summary of this chapter provides several key takeaways applicable to the further analyses within this paper.

A. Uniformed Military Personnel

In general, uniformed military personnel must be physically qualified for active service and be of good moral character.[13] Albeit somewhat vague in concept, DoDI 1304.26 does outline specific requirements and/or further references for each of these criteria. The following paragraphs provide specific requirements for each of the military personnel subsections.

1. Enlisted

The enlisted force establishes the backbone of the Service because it consists of the majority of each Service's respective force structure. Requirements for enlistment are designed as inclusive, while primarily targeting young adults about to begin their careers (eligibility starts at 17 years old). The door for citizenship is also opened, allowing not only American citizens, but also those "lawfully admitted to the United States for permanent residence" or those described in one of several "compacts" (i.e., international agreements (IAs)).[14] These compacts include "… the Compact of Free Association between the Federated States of Micronesia and the United States, the Compact of Free Association

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[12] Officers include the subcategories of limited duty officer (LDO) and warrant officer (WO).

[13] Department of Defense, "Qualification Standards for Enlistment, Appointment, and Induction," DoDI 1304.26 (Washington, DC: USD(P&R), September 20, 2005), 8, http://dopma-ropma.rand.org/pdf/DODI-1304-26.pdf. The reason for good moral character is defined as follows: "The military Services are responsible for the defense of the nation and should not be viewed as a source of rehabilitation for those who have not subscribed to the legal and moral standards of society at large."

[14] Ibid., 7.

between the Republic of the Marshall Islands and the United States, or the Compact of Free Association Between Palau and the United States. However, the Secretary concerned may authorize the enlistment of a person not described above if the Secretary determines that such enlistment is vital to the national interest."[15] In terms of education, "a high school diploma is desirable, although not mandatory, for enlistment."[16]

2. Officer

While the employment and management of officers vary between the Services, only an officer can command troops and exercise associated command authorities.[17] As defined by DoDI 1310.02, a Commissioned Officer is defined as "An officer in any of the military Services in the Department of Defense who holds a grade and an office under a commission signed by Presidential authority, and who is appointed as a Regular or a Reserve officer."[18] Officers must be a citizen of the United States and be able to complete 20 years of active commissioned service prior to their 62nd birthday.[19] With a few rare exceptions, a baccalaureate degree is also a prerequisite for officers.[20]

a. Navy Limited Duty Officer (LDO)

As a subset of the officer corps, the Navy's LDO corps includes ranks of O-1 to O-6. However, while these officers fill management, leadership, and command positions commensurate with their rank, their associated career fields require technical background and skills that cannot be attained through normal development.[21] LDOs are currently

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[15] Ibid., 7.

[16] "A person who is not a high school graduate may not be accepted for enlistment in the Armed Forces unless the score of that person on the Armed Forces Qualification Test (AFQT) is at or above the thirty-first percentile; however, a person may not be denied enlistment in the Armed Forces solely because he or she does not have a high school diploma if his enlistment is needed to meet established strength requirements." See Armed Forces, 10 U.S.C., Volume I § 520 (Washington, DC: U.S. Government Printing Office, July 2011), http://armedservices.house.gov/index.cfm/files/serve?File_id=7C199E0E-1614-497F-A818-B5D5B4BF33B5.

[17] Ibid.

[18] Department of Defense, "Appointing Commissioned Officers," DoDI 1310.02 (Washington, DC: USD(P&R), May 8, 2007), 9, http://dopma-ropma.rand.org/pdf/DODI-1310-02.pdf.

[19] Armed Forces, 10 U.S.C., Volume I § 532. (With respect to a person who has been lawfully admitted to the United States for permanent residence or for a United States national otherwise eligible for appointment as a cadet or midshipman when the Secretary determines that the national security so requires, but only for an original appointment in a grade below O-4).

[20] Department of Defense, "Qualification Standards for Enlistment, Appointment, and Induction," DoDI 1304.26, 7. US Code Title 10, section 12205 states Baccalaureate degree is required for Reserve and National Guard officers O-2 and above.

[21] United States Navy, *The Limited Duty Officer and Chief Warrant Officer Professional Guidebook,* NAVPERS 15627A (Arlington, VA: Bureau of Naval Personnel, 2011 Edition (Updated 2013)), 2-1,

chosen from the enlisted ranks and must first demonstrate technical proficiency in their respective career fields. Sailors are not eligible to become an LDO until they are at least an E-6 for a period of 1 year (and with all E-7 eligibility requirements met).[22] Since they are selected from the enlisted corps, LDOs do not necessarily require a baccalaureate degree and though current policy restricts LDO accession from the enlisted ranks, this is not required by law.[23]

b. Warrant Officer (WO)

Another technically focused subset of the officer corps is the WO. As described by the Department of the Army, WOs make up the technical foundation of the associated Service; however, unlike traditional commissioned officers who focus on commanding troops and who staff duty positions, WOs are solely focused on their chosen career specialty.[24] In Navy parlance, "Warrant officers 'bridge the gap' between the enlisted and technician level and other officers, thereby improving the efficiency and effectiveness of the organization."[25] Sitting within the force structure between the most senior non-commissioned officer (NCO) (E-9) and the most junior commissioned officer (O-1), an appointment as a WO holds similar requirements to that of a commissioned officer.[26] A WO is typically appointed to rank of W-1 while the ranks of Chief Warrant Officer (W-2 through W-5) receive commissions similar to the traditional officer corps.[27] Under Title 10 authority, "… a warrant officer may be assigned to perform duties that necessarily include those normally performed by a commissioned officer."[28] Therefore, a WO can hold the position of command and exercise the associated authorities of that command.

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http://www.public.navy.mil/bupers-npc/officer/communitymanagers/ldo_cwo/Pages/GUIDEBOOK.aspx.

[22] Ibid., 2-2.

[23] Ibid., 2-1.

[24] U.S. Army Website, "Career & Jobs: Warrant Officer," accessed August 25, 2014, http://www.goarmy.com/careers-and-jobs/current-and-prior-service/advance-your-career/warrant-officer.html.

[25] United States Navy, *The Limited Duty Officer and Chief Warrant Officer Professional Guidebook*, 2-4.

[26] Armed Forces, 10 U.S.C., Volume III § 3310 (Washington, DC: U.S. Government Printing Office, July 2011). http://armedservices.house.gov/index.cfm/files/serve?File_id=FC0173D5-F7D3-4D74-8D42-1B9E185B7C6B. This paragraph outlines the rank structure. Additional requirements are outlined in terms of education (a baccalaureate degree is not mandatory, although, in practice, it is common).

[27] Armed Forces, 10 U.S.C., Volume I § 571.

[28] Armed Forces, 10 U.S.C., Volume III § 3548.

1) Army

Comprising 15% of its officer corps, the Army represents the largest WO corps within DoD.[29] Although WOs are typically selected from the non-commissioned officer corps (usually Sergeant, E-5 and above) direct accessions are possible (e.g., aviation).[30]

2) Navy

Selected from the senior enlisted force, Sailors are only eligible upon serving time as a Chief Petty Officer (E-7 through E-9).[31] In contrast to the Army's WO program, the Navy abolished the rank of W-1, and Sailors are commissioned directly into the rank of Chief Warrant Officer-2 (CWO-2).[32] Also of note, the Navy had a flying WO program that targeted younger enlisted Sailors; however, in 2013, it was terminated after 6 years when it was deemed that the needs of the Navy had changed and that "the long-term impact of keeping it going would hurt both the people and the Service."[33]

3) Air Force

While the Air Force discontinued its WO program in 1959 for a myriad of reasons, including the reduction overhead/gaining efficiencies within the Air Force technical structures by eliminating an entire personnel management system, the WO ranks are still authorized by Title 10.[34] This current IDA paper acknowledges the lack of an Air Force WO force structure, along with the additional overhead required to establish such a program. Although options to use WOs within an UAS program are analyzed, the constraints associated with the Air Force's force structure are applied to the subsequent cost/benefit analysis.

B. DoD Civilian

A DoD civilian is typically defined as a federally appointed employee by U.S.C. Title 5, Government Organization and Employees. These individuals are appointed into the civil

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[29] U.S. Army Website, "United States Army Warrant Officer Recruiting," accessed August 25, 2014, Website. http://www.usarec.army.mil/hq/warrant/.

[30] Ibid.

[31] United States Navy, *The Limited Duty Officer and Chief Warrant Officer Professional Guidebook*, 2-5.

[32] Ibid., 1-5.

[33] Mark D. Faram, "Flying Warrant Program Gets the Ax," *Navy Times*, August 24, 2013, http://www.navytimes.com/article/20130824/CAREERS/308240003/Flying-warrant-officer-program-gets-ax.

[34] Warrant Officer Historical Foundation Website, "Warrant Officer Programs of the Other U.S. Uniformed Services: U.S. Air Force," accessed August 25, 2014, https://warrantofficerhistory.org/WO_Prog_Other_Svc.htm; Armed Forces, 10 U.S.C., Volume III § 8575.

service and are "engaged in the performance of a Federal function under authority of law or an Executive act" and, for this paper, are subject to the supervision of either a member of a uniformed Service and/or another government civilian while in this role.[35] It is also important to note, that in some cases (e.g., defense intelligence activities) government civilians are also appointed under Title 10 authorities.

DoDD 1404.10 outlines a specific subcategory of DoD civilians who are "typically away from normal work location of DoD civilians, or in situations where other civilians may be evacuated to assist military forces where the use of DoD civilians is appropriate."[36] These civilians are members of the DoD expeditionary workforce. The directive states further that this portion of the workforce "shall be organized, trained, cleared, equipped, and ready to deploy in support of combat operations by the military; contingencies; emergency operations; humanitarian missions; disaster relief; restoration of order; drug interdiction; and stability operations …."[37]

Statutory guidance directs the expeditionary workforce to be organized, trained, and equipped for contingency operations. However, research revealed that while this category of performer is extremely relevant to UAS operations, in many cases the current expeditionary workforce structure is based upon a loose collection of volunteers who are needed to fill deployed administrative functions and who are trained on an add-needed basis.[38] Despite the apparent discourse between reality and statutory guidance, subsequent analysis will focus on the applicability of such a workforce to UAS operations.

C. DoD Contractor

U.S.C. Title 5 defines a DoD contractor as an independent individual and/or company that has been contracted by or on behalf of DoD to accomplish a DoD-related function.[39]

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[35] Government Organization and Employees, 5 U.S.C. § 2105 (Washington, DC: U.S. Government Printing Office, March 2008), http://www.gpo.gov/fdsys/pkg/CPRT-110HPRT38035/pdf/CPRT-110HPRT38035.pdf. Other supervisors listed by Title 5 include the President, Members of Congress, heads of Government-controlled corporations, or an adjutant general designated by the concerned Secretary under section 709(c) of title 32.

[36] Department of Defense, "DoD Civilian Expeditionary Workforce," DoDD 1404.10 (Washington, DC: USD(P&R), 29 January 2009) 1, http://www.dtic.mil/whs/directives/corres/pdf/140410p.pdf.

[37] Ibid. In DoDD 1404.10, this sentence concludes with "… of the Department of Defense in accordance with DoDD 3000.05." DoDD 3000.05 was superseded by DoDI 3000.05 in September 2009.

[38] Office of the Under Secretary of Defense for Personnel and Readiness (OUSD/P&R), in discussion with the author, October 23, 2014.

[39] Government Organization and Employees, 5 U.S.C. § 552a (3)(m)(1). Although this section deals with administrative records-keeping, it provides a simple and clear definition of a government contractor.

D. Summary

While the delineations outlined in this chapter are relatively well known, the following points are key takeaways applicable to the further analyses provided in this paper:

- Only uniformed military officers can hold positions of command (this includes LDOs and WOs).
- LDOs and WOs are subcategories of the officer corps used by some Services to focus on and capture long-term technical expertise.
- The Air Force lacks a WO force structure and, although authorized by Title 10, requires additional overhead to establish such a program. Similarly, the Navy lacks a flight WO program.
- The DoD expeditionary workforce is defined as a DoD civilian subcategory that is organized, trained, and equipped for expeditionary operations.

3. Statutory Guidance Review: Workforce Mix

This chapter summarizes the analysis of standing statutory guidance to help answer the question of who is *authorized* to conduct DoD UAS operations.[40] Many assume that since DoD already uses uniformed military personnel and contractors for UAS operations, this question is a moot point. However, as outlined in Chapter 1, possible UAS missions are so broad in scope that there may be potential to structure a force by delineating categories of performers and mission requirements. Therefore, it is imperative that we understand the statutory and legal rationale. Specifically, analysis will develop a framework for UAS workforce determination, address concerns about which part of the operation/task is inherently governmental (IG), discuss how military incumbency is determined, and finally show how risk mitigation factors into the decision making process.

A. Workforce Mix Determination Framework

To answer the *who* question requires not only understanding the category of performers, as described previously, but also a working understanding of the associated DoD force structure constraints. Phrased as the "Workforce Mix," statutory guidance is primarily provided from Title 10, DoDD 1100.4 ("Guidance for Manpower Management"), and DoDI 1100.22 ("Policy and Procedures for Determining Workforce Mix"). While Title 10 outlines specific requirements in terms of generic missions (armor, infantry, strategic airlift, and so forth), it does not direct any one Service to specifically maintain a UAS capability.[41] Also, Title 10 does not direct a specific category of performer to conduct UAS operations.[42]

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[40] Appendix A provides the additional detailed background analysis.

[41] Example: Title 10, Volume III § 3062 and § 8062 outline Congress' intent for the Army and Air Force, respectively, and, in some cases, outline generic structure (e.g., Army branches). However, it does not dictate a UA program. See Armed Forces, 10 U.S.C., Volume III § 3062 and § 8062.

[42] For example Title 10 § 8067 dictates that Medical, Judge Advocate, and Chaplain services be performed by officers. There is no such designation for UA programs or even for pilots in general. This current IDA paper does not advocate for such direction, but rather highlights the lack of Title 10 restrictions for an unrestricted development of alternative strategies within the constraints of existing generic manpower guidance. See Armed Forces, 10 U.S.C., Volume III § 8067

Title 10

- Does NOT direct any singular Service to maintain a UAS program
- Does NOT direct a specific category of performer to conduct UAS operations.
- Does NOT prescribe a percentage of force and/or rank to support UAS.

Lacking specific Title 10 guidance toward a UAS force structure, DoDD 1100.4 outlines how to implement Title 10 and congressional guidance when determining the appropriate category of performers for military operations. The document is based upon the following guiding principle:

> National military objectives shall be accomplished with a minimum of manpower that is organized and employed to provide maximum effectiveness and combat power.[43]

Manpower guidance found within DoD manning directives and instructions outline several requirements for analysts to follow when determining workforce mix. As part of these principles, the guidance directs analysts to not only consider mission requirements and associated risk, but also to consider all available sources of manpower and that "assigned missions shall be accomplished using the least costly ***mix*** of personnel."[44] For this paper, the previous guidance is distilled into three guiding principles:

UAS Program Alternative Staffing Guiding Principles

- Manpower costs should be minimized to provide optimal effectiveness and combat power.
- Risk mitigation takes precedence over cost savings when necessary to maintain control, capabilities, and/or readiness.
- No single category of performer solution necessarily works best. A ***mix*** must be analyzed.

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[43] Department of Defense, "Guidance for Manpower Management," DoDD 1100.4, 2.

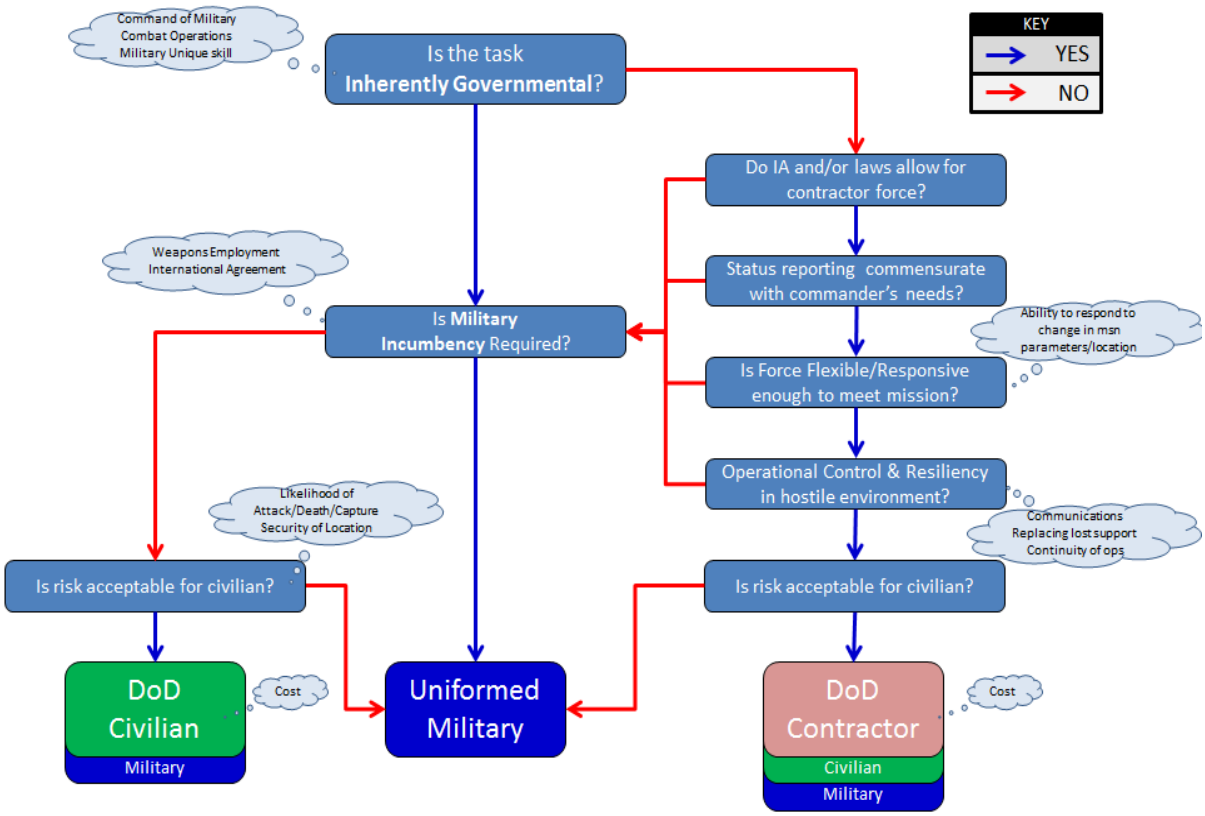
[44] Ibid., (emphasis added).

While there are many intricacies associated with manpower analysis, this paper distills the applicable DoD statutory guidance into the following three overarching questions in terms of the UAS task in question:

Force mix Analysis Questions

- Is the task inherently governmental?
- Is military incumbency required?
- Is the level of risk to force acceptable for civilians?

Using these questions as a framework, the decision tree depicted in Figure 2 was developed to analyze potential staffing alternatives. While this generic roadmap is a simplification of the overall requirements, it will help find an appropriate balance across UAS missions and associated forces.



Note: Subsequent analysis further breakdowns the military component into officer and enlisted subcategories.

Figure 2. Category of Performer Decision Tree

B. Inherently Governmental (IG)

As seen in the decision tree in Figure 2, the first determination made is whether the task at hand is IG. This determination is based on the DoDI 1100.4 constraint that states,

> Functions that are inherently governmental shall not be contracted.[45]

In an attempt to condense associated guidance, DoD updated DoDI 1100.22, "Policy and Procedures for Determining Workforce Mix," in 2010 as an attempt to clarify the "manpower mix criteria and guidance for risk assessments to be used to identify and justify activities that are inherently governmental (IG)"[46] This guidance consolidated previous direction and stands as the DoD standard for determining what is IG.[47]

> ***Inherently Governmental (IG) Activities***
>
> In general, a function is IG if it is so intimately related to the public interest as to require performance by Federal Government personnel. IG functions shall include, among other things, activities that require either the exercise of substantial discretion when applying Federal Government authority, or value judgments when making decisions for the Federal Government ….[48]

While DoDI 1100.22 provides in-depth detail for manpower analysts to determine what is and is not IG, the following summary distills this information into issues applicable to this UAS study. Within this summary, key criteria elements are separated into those that are mission related and those that are risk related.

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[45] Ibid., 3.

[46] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 1.

[47] Ibid., 2.

[48] Ibid., 13.

Key Criteria: IG Determination[49]

- **Mission-Focused Criteria**
  - Command of military forces
  - Operational control of combat, combat support, and combat service support units
  - Conduct of combat operations
  - Peacetime commercial function that, in the event of a contingency, is required to mobilize and conduct an IG function
  - Ultimately accountable for accomplishment of missions and/or discretionary exercise of DoD authority
  - Military-unique knowledge and skills
- **Risk-Focused Criteria**
  - Security in hostile or volatile areas
  - Threat level could increase and military personnel would be needed on short notice to provide or augment a military capability
  - Unsafe number of personnel in hostile area who are not combatants
  - DoD civilians/contractors will not/cannot continue to perform work
  - Enemy or hostile force encounter would likely lead to hostilities
  - "Emergency-Essential" manpower … continuity of ops for essential functions

One caveat to the IG determination is for those tasks which are previously identified as core capabilities for critical operations. DoDI 1100.22 states, "…DoD Components shall review the function to verify whether the work should be performed by government personnel to provide a core capability for readiness or risk mitigation purposes, or for continuity of operations."[50] If a function is determined as such a core capability, the workforce mix determination is determined as inherently IG and the decision is then between DoD Civilian or uniformed military categories of performers.

When assessing UAS program manpower and the IG determination, one must keep in mind the UAS program alternative staffing guiding principle that states that "no single category of performer solution necessarily works best." Therefore, analysis will not only look at individual mission sets, but will also focus on individual tasks within those missions to analyze a mixed/total force options that will provide the appropriate balance of military, civilian, and contractor.[51]

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[49] Appendix A provides additional information describing the specific criteria.

[50] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 49.

[51] While the Reserve Component plays a major role in the total force discussion, the analysis of an Active/Reserve mix was beyond the scope of this paper and has been covered in multiple other studies.

C. Military Incumbency

As depicted in Figure 2, upon determination of a task as IG, military incumbency must be assessed. Contrasting the IG determination, the requirements supporting this decision are rather straightforward. The first step is determining the following: Is an IA in place (e.g., Status of Forces Agreement (SOFA)) that requires only uniformed military members to conduct this operation? Next, does the mission require the employment of, or terminal guidance of, kinetic weapons? Although the statutory guidance does allow for each category of performer to employ lethal force under certain conditions, for those personnel not in active military service, employing lethal force is limited to self-defense.[52] Since the employment of weapons in combat is IG, the following is a key tenet to the remainder of the paper:

> UAS Operations that include the employment of, and/or provide terminal guidance to, kinetic weapons require **uniformed military personnel**.

In addition to weapons employment, analysis indicates that UAS aircrew/operators who provide direct support to forces actively engaged in hostilities also requires support from uniformed military personnel.[53] Therefore, the following definition of military incumbency is used for the remainder of this analysis:[54]

> UAS military incumbency is indicated when an aircrew/operator position:
> - Requires **employment/terminal guidance** of kinetic weapons,
> - Provides **direct support** to forces that face the potential of, or are directly engaged in **armed hostilities** and/or
> - An **IA** requiring use of uniformed military members to conduct operations in host country.

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[52] Although somewhat overly simplified, this paper will limit the discussion of UAS weapons employment to those weapons that are offensive in nature. Appendix A contains further background discussion on the use of Self-Defense Rules of Engagement (ROE).

[53] See Appendix A for background analysis.

[54] Although this somewhat oversimplifies the issue, other intricacies are addressed in the assumption of risk analysis. Appendix A provides additional information on what entails "direct support" for UAS aircrew/operators.

D. Risk Assessment

Assessing the risk to the force is the most ambiguous decision of this analysis. While Figure 2 shows risk analysis as one of the final decision points, it is really imbedded throughout the decision tree. This risk analysis is based on the Commander's best military advice from the information that he/she is given at that time. DoDI 1100.22 stresses the importance of analyzing risk when determining the workforce mix.

> Risk mitigation shall take precedence over cost savings when necessary to maintain appropriate control of Government operations and missions … the Defense workforce shall have sufficient flexibility to reconstitute or expand the capabilities of the military Services on short notice to meet a resurgent or increased threat to U.S. national security. Accordingly, risk mitigation shall take precedence over cost savings when necessary to maintain core capabilities and readiness.[55]

With this in mind, the factors behind this decision could easily change during an operation, and that potential must also be included in the Commander's assessment. As such, the Commander is asking two questions: (1) What is the likelihood that this force will come under direct engagement with the enemy (i.e., risk of injury, death and/or capture), and (2) what is the likelihood that this force will have to pick up arms (includes self-defense considerations)? If either likelihood is "high" and/or in the Commander's belief is beyond the acceptable risk for a civilian force, uniformed military members are required.

DoDI 1100.22 also directs that when addressing the possible use of contractors, risk should be considered "to preclude ceding governmental control and authority of IG functions to the private sector where there is insufficient public **accountability and transparency**."[56] It also discusses analyzing the operational/logistical footprint associated with various workforce mix solutions since an overly large footprint could limit flexibility and introduce an unacceptable level of risk.[57] The following list summarizes the applicable risk factors to the analysis of UAS program staffing strategies.[58]

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[55] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 2.

[56] Ibid., 46 (emphasis added).

[57] Ibid., 53.

[58] Appendix A provides additional information describing the specific criteria.

IG Risk Assessment Factors

- Accountability and transparency
- Operational and logistical footprint
- Readiness reporting
- Replacing lost support
- Continuity of operations during hostilities
- Operational control in hostile environments
- Flexibility and responsiveness
- Discipline authority
- Restrictions due to laws and IAs

When looking down the "right side" of the category of performer decision tree (see Figure 2), risk must also be assessed in terms of the force's flexibility/responsiveness. While risk is inherent in deployed military operations, which include forward-deployed UAS elements, operating concepts enable some UAS to control missions from the Continental United States (CONUS) thereby decreasing the risk to force. It is important to understand not only who can deploy, but where and into what conditions each category of performer can deploy. While there are provisions that allow all three categories to deploy, there are key considerations for DoD civilians and DoD contractors.[59]

[59] The assumption is that uniformed military personnel are not restricted from deploying where tasked by DoD. Since all three categories of performers can deploy, "ability to deploy" is not included in the decision tree framework; however, elements of this factor must be included when considering both risk and cost.

For civilians, DoDI 1404.10, "DoD Civilian Expeditionary Workforce," provides the primary statutory guidance associated with this category of individuals and states that they will be included in the DoD Global Force Management process and that it will reflect designation of:[60]

> **DoD civilian employees as the preferred sourcing solution** when appropriate for **non-warfighting** Combatant Command request for forces and requests for capabilities, and Joint Individual Augmentation requirements on Combatant Command Joint Manning Documents for r**ecurring and emergent mission requirements**.[61]

DoD contractors are also able to deploy in support of contingencies; however, the level of that support and associated responsiveness/robustness is often tied to significantly increased dollar amounts. DoDI 3020.41[62] is the primary source for using a contracted force in such operations. It outlines how "contracted services may be utilized in applicable contingency operations for all functions **not inherently governmental** [and that] contractor personnel may be utilized in support of such operations in a non-combat role as long as contractor personnel residing with the force in foreign contingencies have been designated as CAAF [contractors authorized to accompany the force] by the force they accompany ….[63] The CAAF designation provides contractor personnel Geneva Convention Prisoner of War protections in the event of capture; however, the instruction stresses the fact that such contractors face the "**risk of injury or death** incidental to enemy actions while supporting military operations."[64] Much of the subsequent discussion in this instruction (DoDI 3020.41) mirrors the factors discussed in the previous risk consideration. While contractors can provide support functions such as maintenance, private security (in

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[60] While DoDI 1404.10 provides the guidance for the Expeditionary workforce, as discussed in Chapter 2, there is an apparent discourse between reality and statutory guidance. The individuals are typically a loose collection of volunteers used to fill deployed administrative functions (trained on an as-needed basis) rather than specifically organized trained and equipped.

[61] Department of Defense, "DoD Civilian Expeditionary Workforce," DoDI 1404.10, 3 (emphasis added). Some associated constraints with this force are that those personnel designated as expeditionary workforce are susceptible to expeditionary assignments in 6-month rotational periods and that an individual's deployment tour shall not exceed 2 years. While this rotation is not significantly different from rotational goals associated with uniformed military personnel, it must be considered when assessing the right size and costs associated with the use of DoD civilian expeditionary workforce personnel.

[62] Department of Defense, "Operational Contract Support (OCS)," DoDI 3020.41 (Washington, DC: USD(AT&L), December 20, 2011), http://www.dtic.mil/whs/directives/corres/pdf/302041p.pdf.

[63] Ibid., 9 (emphasis added).

[64] Ibid., (emphasis added).The instruction does make a point that CAAF status does not apply to contractor personnel supporting domestic contingencies.

some specific cases), billeting, and so forth, they are often bound by the laws of the host nation and could lose CAAF status depending "on where they are detailed to work by their employer or on the provisions of the contract."[65] Examples of limiting factors that a contracted force may be held to host nation laws include, "labor worker permits; workforce and hour restrictions; medical, life, and disability insurance coverage; taxes, customs, and duties; cost of living allowances; hardship differentials; access to classified information; and hazardous duty pay."[66] Finally the instruction highlights a key limiting factor for the contracted force, logistics:

> Contractors are generally responsible for providing their own logistical support. However, in austere, uncertain, and/or hostile environments, the DoD may provide logistical support to ensure continuation of essential contractor services.[67]

Armed with the basic framework outlined by the category of the performer decision tree (see Figure 2), Chapter 4 summarizes the current methodologies that each of the Services uses. Understanding what is currently used not only allows further analysis into any common practices applied among the Services, but also helps to identify associated gaps between statutory guidance and practice that the follow-on analysis of alternatives can address.

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[65] Ibid. Specific guidance on Private Security Contractors is provided by the Department of Defense, "Private Security Contractors (PSCs) Operating in Contingency Operations, Humanitarian or Peace Operations, or Other Military Operations or Exercises," DoDD 3020.50 CE-01(Washington, DC: DoD Directives Service, August 1, 2011).

[66] Ibid.

[67] Ibid., 2.

4. Current Service Practices

Each Service has a unique perspective on the purpose and associated mission set of its UAS programs. This chapter will list each of the Services to show the missions associated with UAS, how the UAS are employed, and how each Service presents its UAS forces. Chapter 5 provides the analysis comparing these programs. Table 2 depicts the UAS programs analyzed in this paper.

Table 2. DoD UAS Programs Analyzed

Group	Air Force	Army	Navy	Marine Corps	SOCOM
Group 5 • > 1,320 lbs • > FL180	RQ-4 Global Hawk MQ-9 Reaper	NA	MQ-4 Triton	NA	MQ-9 Reaper
Group 4 • > 1,320 lbs • > FL180	MQ-18 Predator	MQ-1C Gray Eagle	MA-8 Fire Scout	NA	MQ-1B Predator MQ-1C Gray Eagle
Group 3 • < 1,320 lbs • < FL180 • < 250 kts	NA	RQ-7 Shadow	RQ-21 Blackjack	RQ-7 Shadow RQ-21 Blackjack	RQ-7 Shadow RQ-21 Blackjack
Group 2 • 21–55 lbs • < 3,500 AGL • < 250 kts	ScanEagle	NA	ScanEagle	ScanEagle	ScanEagle
Group 1 • 0–20 lbs • < 1,200 AGL • < 100 kts	RQ-11 Raven	RQ-11 Raven RQ-20 Puma	NA	WASP RQ-11 Raven RQ-20 Puma	WASP RQ-11 Raven RQ-20 Puma

Note: While this list is not all inclusive, it does incorporate the more prominent programs and constitutes a majority of DoD UAS programs of record.

Detailed analysis into the effectiveness of the Service's force presentation is not provided; however, this chapter concludes with a summary of common practices and/or associated gaps between the representative staffing methodologies.[68]

A. Joint UAS Requirements

While this paper refrains from an in-depth review of training and employment practices, a synopsis of the minimum joint UAS training standards is applicable to subsequent

[68] As with many rapidly developing programs, the exact numbers of aircraft and manpower associated with each program changed rapidly—even during the research for this paper. While the data contained within were current as of the research date, these changes are problematic for analyses when attempting to stick to specific manpower program levels. Therefore, this chapter and subsequent analyses will maintain a general program overview rather than chase "current" program levels. Specificity is provided where appropriate, but, for this paper, the importance lies in the analyses of the policies and their application to individual Service UAS programs to provide a long-term view applicable to all UAS programs, not just those currently in service.

analyses. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3255.1[69] is the guideline "to ensure the requisite knowledge, skills and abilities are addressed appropriately."[70] These standards were developed to meet or exceed Federal Aviation Administration (FAA) requirements in an effort "to facilitate UAS access into the National Airspace System (NAS)."[71] CJCSI 3255.01 guidance sets a basic UAS qualification (BUQ) and a joint mission qualification (JMQ). The BUQ details the "general aviation knowledge and UAS knowledge-based skills to operate a UAS safely as required by crew duties or position (i.e., Pilot/Aircraft Operator)."[72] The BUQ level directly correlates to the NAS and/or International Civil Aviation Organization (ICAO) airspace in which the pilot is expected to operate, depicted as follows:[73]

BUQ Level-I. Knowledge and knowledge-based skills required to fly VFR [Visual Flight Rules] in Class E, G, and Restricted/combat airspace <1,200 ft. AGL [altitude above ground level]. [**FAA Equivalent:** FAA requirements do not currently exist for this group of aircraft.]

BUQ Level-II. Knowledge and knowledge-based skills required to fly under VFR in Class D, E, G, and Restricted/combat airspace <18,000 ft. MSL [mean sea level]. [**FAA Equivalent:** Sport Pilot]

BUQ Level III. Knowledge and knowledge-based skills required to fly under VFR in all classes of airspace *except U.S. and ICAO Class A.* [**FAA Equivalent:** Private Pilot]

BUQ Level IV. Knowledge and knowledge-based skills required to fly *VFR/IFR [Visual Flight Rules/Instrument Flight Rules] in all weather conditions and classes of airspace up to FL600 [flight level 600]*. [**FAA Equivalent:** Private Pilot with Instrument rating]

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[69] Department of Defense, "Joint Unmanned Aircraft Systems Minimum Training Standards," CJCSI 3255.01 (Washington, DC: Joint Staff, 17 July 2009; CH 1, 31 October 2011; Directive Current as of 4 September 2012), http://www.dtic.mil/cjcs_directives/cdata/unlimit/3255_01.pdf.

[70] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 79.

[71] Department of Defense, "Joint Unmanned Aircraft Systems Minimum Training Standards," CJCSI 3255.01, 1.

[72] Ibid., 2.

[73] Ibid., A-2 (emphasis added). BUQs are cumulative (e.g., to achieve a BUQ III, a pilot must also meet BUQ I and II requirements). The BUQ requirements meet or exceed the requirements of their FAA equivalents (as described by the 14 Code of Federal Regulation (CFR).

A detailed comprehension of airspace classification (A–G) is not necessary other than understanding that Class A is the most restrictive (e.g., international airports and civilian airliner airways), Class D is found at many smaller airports and military airfields, and Class G is the least restrictive (e.g., rural farm land).

CJCSI 3255.01 also dictates JMQs to "provide general knowledge of the UAS mission/objective … to ensure [that] the crews understand their role in accomplishing a larger military objective."[74] The three JMQ levels are as follows:[75]

> **JMQ-A.** These qualifications support **unit-level ISR and Fires** tasks in support of the JFC. Mission support with capabilities defined in the JMTL [Joint Mission Task List].
>
> **JMQ-B.** These qualifications support **theater-level advanced ISR/IAA [Intelligence, Surveillance, and Reconnaissance/Incident Awareness and Assessment]** mission support with defined capabilities in the JMTL of the JFC.
>
> **JMQ-C.** These qualifications support **strategic level Fires and CSAR/PR [combat search and rescue/personnel recovery]** tasks in support of the JFC as defined in the JMTLs.

The nuances between these (**bold texts**) are significant because they show the level of anticipated mission execution, which ties directly into how the Services view their respective UAS crew forces. Like the BUQs, the JMQs are cumulative in nature.

CJCSI 3255.1 goes one step further in tying the BUQ and the JMQ as minimum standards to each of the previously described UAS classifications (Groups 1–4).

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[74] Ibid., 2.

[75] Ibid., B-1 (emphasis added).

Table 3 depicts the minimum standard required by the CJCSI for each of the UAS groups.[76]

Table 3. CJCSI 3255.1 Minimum Training Standards

Group	BUQ	Airspace	JMQ	Mission level
5	IV	VFR/IFR, all classes, all weather FL600	B	Theater ISR
4 3	III	VFR, All classes ***except*** U.S./ICAO Class A		
2	II	Restricted/combat <18,000 ft. MSL VFR, Class D, E, and G	A	Unit ISR/Fires
1	I	Restricted/combat <1,200 ft. AGL VFR, Class E and G		

B. Air Force

The Air Force's UAS efforts focus on Group 4/5 UAS, which the Air Force refers to as RPA.[77] The Air Force operates and maintains these assets within DoD and, as with most Air Force aircraft, RPAs are viewed as operational/strategic assets whose support is typically focused regionally rather than in a direct support role to any single unit.[78] While the focus of the Air Force is primarily on RPAs, the 2014 RPA Vector report does reemphasize "the inherent potential and emerging capabilities of small unmanned aircraft systems (SUAS),"[79] the term that the Air Force uses for UAS Groups 1–3. The overall vision is for the Air Force to tie RPAs and SUAS together into a family-of-systems approach that is agile and responsive to the JFCs requirements.

1. Applied Missions

The Air Force's five core missions are as follows:

- Air and Space Superiority,
- ISR

[76] JMQ C (strategic level fires and CSAR/PR) is not set as a minimum requirement by CJCSI 3255.1; however, it is used as the minimum standard for the Air Force MQ-1/9.

[77] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 13.

[78] While RPAs can indeed provide direct support to a specific unit, they are typically launched to support multiple units during a single sortie, thereby maximizing collection requirements within their area of responsibility.

[79] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 12.

- Rapid Global Mobility,
- Global Strike, and
- C2.

While the primary focus of the Air Force's UAS program is focused on ISR and Global Strike, Air Force RPAs have a role in providing Air and Space Superiority and C2. The 2014 RPA Vector report depicts a vision in which these missions will continue to expand and in which future RPA programs will broaden to consider global mobility in missions such as cargo movement and air refueling.[80] While RPA have been used in "atypical" military missions, such as humanitarian relief and/or support to non-governmental agencies, the core Air Force missions flown today focus on close air support (CAS), ISR, CSAR, and strike coordination and reconnaissance (SCAR). While these missions are similar to those performed by UA in the other Services, the Air Force has a global commitment. Even when regionally assigned (e.g., Afghanistan), Air Force RPAs are tasked to support multiple teams during their often 20+-hour flights. These aircraft are also responsible for adjusting mission focus depending on which ground force they are supporting at that time. Within a single flight, Air Force RPAs can go from basic ISR collection, to convoy protection, to C2 relay, to providing CAS and associated precision weapons employment—all for several different ground component commanders.

In contrast, the Air Force's SUAS force is currently used at the tactical level in support of battlefield airmen and security forces. Similar to that of the other Services' tactical ground units, these UA are used for point security or short-duration missions to provide a unique vantage point typically unavailable at the small-team level. While the team missions can vary from humanitarian assistance to support of direct fire missions, SUAS are kept at the tactical unit support level.

2. Employment Concept

Air Force RPA fly in support of global operations 24 hours a day, 7 days a week, 365 days a year (24/7/365), primarily from bases stationed in CONUS. Figure 3 depicts this extensive communication infrastructure referred to as remote split operations (RSO). While a small contingent is required to deploy in support of launch and recovery operations, most of the Air Force RPA crew force remain CONUS. This approach provides the benefits of minimizing forward-deployed forces and decreasing the number of rotational forces required.[81]

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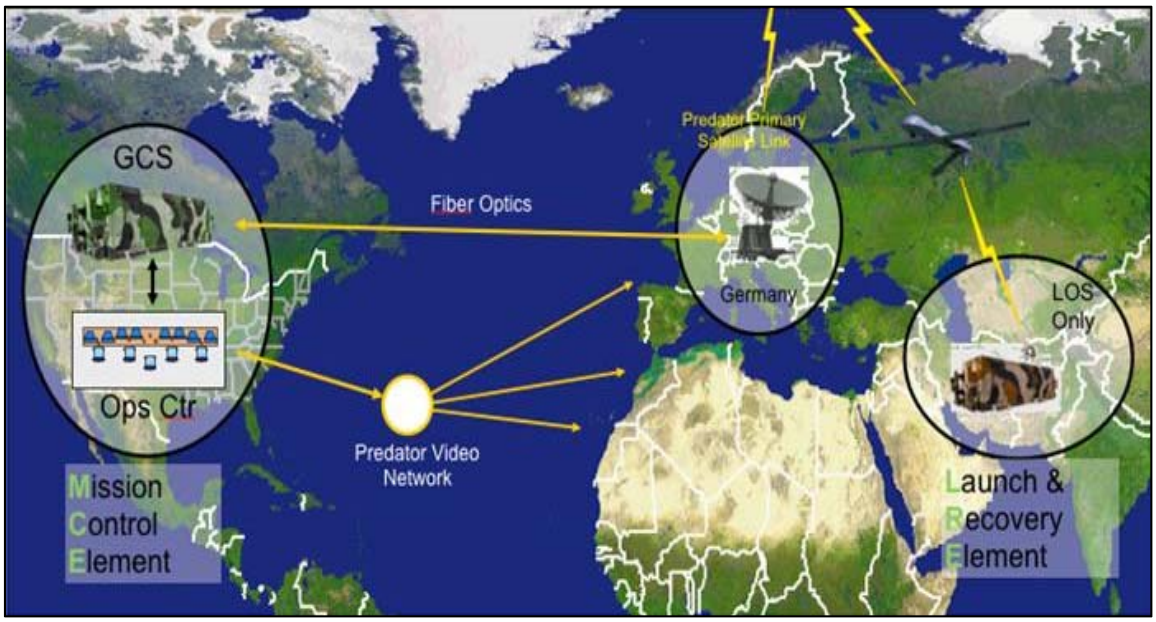
[80] Ibid., 18.

[81] "Deployed-in-garrison" construct was noted as creating challenges between balancing combat operations and typical in-garrison duties. While several studies address this topics, this paper will focus on the manning construct from an effectiveness, mission risk, and cost perspective.



Source: 3rd Special Operations Squadron Unit Capabilities Brief, CAO February 2011 (author's personal files).

Figure 3. Air Force RPA RSO

3. Force Presentation Model: Uniformed Military

The Air Force uses the Squadron as the primary unit responsible for provided UAS capability to the JFC. Air Force RPA support is quantified by the number of Combat Air Patrols (CAPs) provided. A CAP is a singular aircraft that is airborne over a designated objective(s), where the measure of CAPs is typically assessed by how many CAPs can be provided globally at any one time.[82] The typical active duty MQ-1/9 Squadron construct is to support five CAPs, while the reserve component squadron construct can support up to three.[83] Since these operations run "24/7/365," the Air Force currently applies a 10:1 crew ratio to their MQ-1/9 pilot and sensor operator positions. This translates to 10 pilots and 10 sensor operators for each CAP for which a squadron is responsible.[84] For RQ-4

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[82] Current Air Force program provides 65 total RPA CAPs, which includes MQ-1, MQ-9, and RQ-4.

[83] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 16.

[84] In trying to grasp the number of individuals associated with a single aircraft, it is helpful to see a single RPA aircrew as 20 people (10 pilots, 10 sensor operators who operate 24/7/365 operations), thereby manning Air Force RPA at a crew-to-CAP ratio of 1:1. In this manner, it becomes analogous to other aircraft (yet other aircraft provide significantly less time airborne and do not provide 24/7/365). For example, an AC-130H gunship has 14 crew members, and an E-8C Joint Surveillance Target Attack Radar System (JSTARS) has between 21 and 34 crew members, depending on mission length. Also of note, an Air-Force-conducted manpower study, which reportedly validates Air Force RPA crews' claims that an increase in the crew-to-CAP ratio is actually required, was expected for official release end of February/beginning of March 2015.

operations, this ratio is 15:1.[85] While the RSO construct eliminates the need for rotational forces, this manpower ratio is still required to meet the requirements to enable leave, days off, administrative duties, continued professional development (e.g., professional military education), and so forth. Since the reserve component must maintain a balance between its full-time active guard and reserve (AGR) and part-time traditional reservist (TR) positions, the manning construct is somewhat different. A typical three-CAP squadron has 56 positions per crew, balanced between 15 AGR and 41 TR positions.

In terms of category of performers within the RPA force, the Air Force uses rated officers for pilots and enlisted personnel for sensor operators.[86] The Air Force contends that the level of responsibility placed upon its pilots is associated with those traits of a commissioned officer. Rated RPA pilots come from two sources: (1) the undergraduate RPA training pipeline or (2) those rated officers who completed the traditional undergraduate pilot training (UPT) and previously flew a manned platform before their RPA tour. The goal is for RPA training pipeline pilots, whose training presents a 95% cost savings over their traditionally trained pilot training counterparts, to eventually comprise most of the force.[87] This career field was developed not only to capitalize on the cost savings associated with shorter training timelines, but also to further professionalize and focus the rated RPA force.

The Air Force's view on RPA operational requirements mirrors that of those associated with typical manned platforms. This view also drives the requirement for RPA sensor operators, who are also awarded an aeronautical rating and associated wings, to train at a level commensurate with their career enlisted aviator counterparts.

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[85] Air Force/A2CU, e-mail correspondence with author.

[86] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 13.

[87] Air Education and Training Command, HQ AETC/FMATT, e-mail with author. Costing data from AFI 65-503, "Cost Factors," Table A34-2 *Representative Officer Aircrew Training Costs Variable and Fixed*, 5 March 2014. Air Force Personnel Center RPA managers stated that UPT for a fighter pilot costs approximately $1,463,797 per pilot (T-6, T-38, and Introduction to Fighter Fundamentals) while undergraduate RPA training (URT) only costs $70,446. The cost for UPT graduates designated to fly mobility or refueling aircraft cost $749,354 (URT is 91.6% less costly).

As stated in the RPA vector,

> While RPA pilots and sensor operators face challenges operating aircraft from a remote shelter (e.g., C2 link latency), the majority of **aircrew skill sets** required (e.g., communication, multitasking, airmanship) **are no different from those required for manned aircraft.**[88]

With this in mind, the Air Force acknowledges that while DoD will determine where and how it will operate its aircraft, the individual Service is responsible for creating qualification training programs necessary to safely accomplish that assigned mission. In terms of UAS, the Air Force's RPA Vector report references the CJCSI 3255.1 standards discussed previously.[89] Based on the Air Force's global requirement, which requires flight within ICAO airspace and the often kinetic (i.e., weapons employment) nature of the RPA mission, Air Force RPA crews are trained at the highest (BUQ-V, JMQ-C) level, thereby exceeding FAA requirements and enabling integrated operations within the national/international airspace structure.

In contrast to the larger RPA, Air Force SUAS are operated at the tactical/team level. Although SUAS operators are individually certified through a unique training program, becoming an operator is a secondary duty for airmen. As stated by the RPA vector,

> SUAS operators (SUAS-O) are not rated pilots but function as the pilots in command (PIC) and are responsible for the safe ground and flight operation of the UA and onboard systems. Air Force SUAS-Os are selected, trained, and certified to act as the PICs of their UA based on mission requirements. SUAS-O qualification does not result in award of an Air Force Specialty Code (AFSC) or a Special Experience Identifier.[90]

Therefore, while SUAS operations come with additional training/currency requirements, these operations do not drive an inherent increase of manpower within the unit.[91] This situation is primarily true now within the Air Force due to the fact that Airmen are only

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[88] United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038*, 79 (emphasis added).

[89] Ibid.

[90] Ibid., 13.

[91] As technology and capability among the SUAS force increase, this situation could easily change. As described in the 2014 RPA Vector report, there is a reemphasis on SUAS. Elements within the Headquarters Air Force, which is currently drafting an SUAS vector to shape future efforts. As the systems mature, the need for designated SUAS operators (especially in Groups 2/3) could become a reality.

operating Group 1 UA. Although not a requirement, SUAS operators within the Air Force are typically enlisted personnel, largely due to fact that the career field employing these aircraft (e.g., Security Forces, Battlefield Airmen) is primarily enlisted and is performing operations in local support of its specific unit/team. The Air Force centrally trains RQ-11 operators at a BUQ-II, while individual units assure JMQ-A qualification.[92]

4. Utilization of Contractors

While most of the Air Force UAS program is performed by uniformed military personnel, some support aspects use DoD contractor support. The most prevalent use of contractors is within the deployed maintenance of these systems; however, in some unique cases, the Air Force has contracted UAS flight operations in cases where the demand required an immediate increase in a capability that was not inherent within the existing UAS program. Most notably are those contracts used in support of UAS training operations and where certain special-mission RPA units use contractors to provide deployed launch and recovery operational support.[93] Increases in ISR demand have also led to an increase in government-owned, contractor-operated (GOCO) UAS operations in which the government is able to aptly supply the necessary hardware but is ultimately short the personnel required to conduct combat support operations. For Air-Force-flown aircraft, this situation has presented itself most recently in the use of GOCO MQ-9 operations.

C. Army

In contrast to the Air Force, the Army's UAS program focuses primarily on the smaller Group 1 and 3 aircraft. (The Army does not currently employ Group 2.) Although approximately 92% of the Army's UAS inventory consists of Group 1 UA, it does operate the Group 4 MQ-1C. While the MQ-1Cs are a small portion of the Army's overall fleet (approximately 2%), this capability plays a large part in the Army's overall UAS strategy and brings significant capability to commanders at the lowest level. The level of support varies depending upon the unit to which the UAS is assigned; however, Army UAS operations are typically employed at the tactical level and used in a similar manner to other organic maneuver and fire forces.

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[92] Air Force SUAS School House Det-Commander, e-mail with the author, February 13, 2015. USAF RQ-11s often operate within Class D airspace in support of the base defense mission.

[93] Multiple interviews with RPA Manpower and Career Development Tiger Team. Training operations at Randolph, Holloman, and Creech Air Force Bases (AFBs) use contractors to augment the active duty force to meet training requirements and increased demand for a larger RPA force. While many of the deployed launch and recovery flight operations are conducted by uniformed military, some Air Force RPA squadrons are supported by contracted launch and recovery elements.

As documented in the Army UAS Roadmap report, the typical Army echelons are as follows:[94]

> **Battalion-level and lower:** close-range (less than 25 kilometers), short duration (one to two hours) missions that operate below the coordinating altitude and are thoroughly integrated with ground forces as an organic asset supporting tactical operations.
>
> **Brigade level: medium-range** (less than 125 kilometers), medium-duration (five to 10 hours) missions that integrate with ground forces and other aviation assets.
>
> **Division-level and higher:** extended range (200 kilometers or more), long duration (16 hours or more), missions in direct support (DS), or general support (GS) at the tactical or operational level.

1. Applied Missions

Army Doctrine Publication 1 states that "the Army's indispensable contributions to the joint force—the core competencies—are combined arms maneuver and wide area security."[95] These competencies are those in which UAS applied at the tactical level prove indispensable in today's combined arms warfare. While UAS can easily be employed throughout each of the Army's core competencies, the Army's Unmanned Roadmap report states the overall goal is to "focus Army investments in unmanned systems and technologies to meet the prioritized capability needs of the Warfighter that include the following missions": (1) Reconnaissance and Surveillance, (2) Security, (3) Attack, (4) Command, Control, and Communications Support, (5) Combat Support, and (6) Sustainment.[96] The roadmap further stresses the importance of UAS as the "Eyes of the Army" and that they specifically "support **tactical echelons** in Army and Joint operations and provide the Warfighter a tactical advantage through near real-time situational

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[94] U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035,* 1 (emphasis added).

[95] U.S. Army, *ADP1: The Army* (Washington, DC: Headquarters, Department of the Army, September 2012), 3–4, http://armypubs.army.mil/doctrine/dr_pubs/dr_a/pdf/adp1.pdf.

[96] U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035,* 3–4. Reconnaissance and surveillance include chemical biological, radiological, nuclear, and high-yield explosives reconnaissance and counter explosive hazards. Security includes preserving friendly force combat power and providing threat/terrain information. Attack includes close combat, interdiction attack, strike, and target identification and designation. Command, control, and communications (C3) support enables the commanders to broaden the communication network and improve C2. Combat support includes military intelligence, engineer, military police, chemical operations, and combat identification. Sustainment includes the delivery of supplies and materials to forward-deployed units and the extraction of wounded and enemy prisoners of war.

awareness, multi-role capabilities on demand … and the ability to dynamically retask."[97] The roadmap further defines eight significant "takeaway themes" of the UAS strategy. The following five are applicable to this discussion:[98]

Army UAS Roadmap Takeaway Themes

- The Army's UAS strategy provides dynamically retaskable assets to ground commanders.
- The Army's UAS provide actionable intelligence to the lowest tactical level.
- The Army's UAS strategy shortens the "sensor-to-shooter" timeline.
- The Army's UAS support full spectrum operations.
- Allow commanders to employ a variety of capabilities.

2. Employment Concept

Army UAS, similar to their Air Force counterparts, are also currently employed 24/7/365; however, the significant difference between the programs is that the Army does not currently employ an RSO model. For most of the Army UAS force, this lack of an RSO model is a technical limitation, which applies to all military small UAS, since current Group 1 UAS are not equipped with beyond-line-of-sight (BLOS) satellite capabilities. In the cases where the UAS are capable of BLOS, the Army units capitalize on this capability. However, unlike the Air Force, which operates from CONUS, Army units remain deployed forward so that they can remain organic to the unit, with the idea they can respond better to the commander's need to "dynamically retask" assets as the tactical situation dictates.[99] In addition, the Army's MQ-1C Gray Eagle has several technical differences from its Air Force counterpart, the MQ-1B Predator. The Army's MQ-1C is equipped with an automatic takeoff and landing system, thereby reducing the launch and recovery operator requirements across the force.[100] It is also controlled via "point-and-click" software, while

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[97] Ibid., 1 (emphasis added).

[98] Ibid., 2 (emphasis added).

[99] Some of the systems that are capable of satellite BLOS operations often require some CONUS reach-back in terms of intelligence exploitation (e.g., video, signals, and so forth) because the deployed infrastructure is often unable to meet the volume of information collected.

[100] OSD Website, "MQ-1C Gray Eagle Unmanned Aircraft System," accessed September 10, 2014, http://www.dote.osd.mil/pub/reports/FY2010/pdf/army/2010mq1cgrayeagleuas.pdf.

the Air Force's MQ-1B retains a stick and throttle in addition to its autopilot "point-and-click" functionality.

3. Force Presentation Model: Uniformed Military

Within the Army, the size/echelon of the primary UAS unit providing support depends on which echelon it summarily supports. For example, Group 1 UAS are typically provided by a UA Team to support an associated Battalion (see Table 4). For Group 3, a UAS Company supports the Brigade. Finally, a UAS Company typically provides MQ-1C Gray Eagle (Group 4) support to the Division. Rotational forces are not built within each of these units since they are inherently designed to deploy in-mass with their Higher Headquarters (HHQ) to provide direct support to the same ground force commander with whom they train while in-garrison. Table 5 and Table 6 depict the *typical* force structure for each of these UAS units. In general, the UAS Team consists of 2 operators, the Platoon consist of 27 soldiers (see Table 5), and the Company has approximately 128 total personnel (see Table 6, includes maintenance).[101] As for combat capacity, the Army's UAS program calls for the following aircraft inventory per unit level (typical): Group 1 Teams: 3 aircraft, Group 3 Platoons: 4 aircraft, and Group 4 Companies: 10–12 aircraft each. Unlike the Air Force presentation model, which refers to number of CAPs provided, Army UAS units use their aircraft inventory in a manner directed by the commander and in response to the tactical situation at hand. Simply put, the number of flights launched is a balance between crew/aircraft availability and tactical mission requirements.

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[101] U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035.* Passim and information provided by Mr James Ryan, Aviation Directorate Army Staff G-3/5/7, September 2013. Without maintainers, the company has 97 soldiers.

Table 4. Allocation of Raven Teams and Personnel in an Army Infantry Brigade Combat Team (IBCT)

			Enlisted Personnel			
Unit	SUAS Teams	Ravens	Master Trainer	Master and Operator	Operator	Total
Infantry Battalion	4	12	1		8	9
Infantry Battalion	4	12	1		8	9
Infantry Battalion	4	12	1		8	9
Recon Squadron	3	9	1		6	7
Fires Battalion	2	6	1		4	5
Engineer Battalion	2	6		1	3	4
Support Battalion	1	3		1	1	2
Totals	20	60	5	2	38	45

Source: U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035, 101.* Passim and information provided by Mr. James Ryan, Aviation Directorate, Army Staff G-3/5/7, September 2013.

Table 5. Organization and Staffing of the Army Tactical Unmanned Aerial Systems (TUAS) Platoon

	WO MOS O50U	Enlisted Operator MOS 15 W	Enlisted Repairer MOS 15E	Total
Platoon Headquarters	2	1		3
Mission Planning and Control Section		8	7	9
Launch and Recovery Section		7	8	15
Total Military Personnel	2	16	15	27

Source: U.S. Army, Unmanned Aircraft Systems Roadmap 2010–2035, 99.

Table 6. Composition of the Army Gray Eagle Company

		WO		Enlisted				
	Officer	MOS O50U	Other	Operations MOS 15P	Operator MOS 15W	Repairer MOS 15E	Other MOS	Total
HQ	1	4		5	1		35	46
Flight Platoon		6			45			51
Maintenance Platoon			1			26	4	31
Total Personnel	1	10	1	5	46	26	39	128

Source: U.S. Army, Unmanned Aircraft Systems Roadmap 2010–2035, 97.

In terms of category of performers, the Army currently uses WOs and enlisted soldiers to operate their aircraft. Officer involvement comes with one officer position commanding the Group 4 UAS company[102] while UAS WOs command the Platoon. The Army does have a unique UAS military MOS for both WOs and enlisted soldiers, but does not have the same for the officers O-1 and above.

Although enlisted operators were used to operate the plethora of Groups 1–3 UA, much like the Air Force, the addition of Group 4 UAS capabilities and subsequent tactical capabilities drove the Army to integrate WOs and establish a unique Warrant UAS MOS. According to numbers within the Army's roadmap, WO positions still only comprise ~18% of the UAS Group 4 Companies and ~13% of the Group 3 Platoons. Except for the one Officer (Company Commander), all remaining operators in the units are enlisted soldiers.

4. Utilization of Contractors

The tactical forward-deployed nature of Army UAS tends to drive the requirement for uniformed military personnel. However, over the years, the Army, much like the other Services, has used contractors to provide UAS support and capability where there were associated capability gaps within the Army's programs. Similar to the Air Force, Army UAS contractors support functions such as maintenance and training. In addition, the constant increase in demand has also driven a requirement for MQ-1C GOCO operations.[103]

D. Navy

The Navy's UAS program[104] has focused on support to the Fleet and littoral regions. For this reason, the Navy invested early in Group 2 and has, within the past few years, added the Group 4, MQ-8 Fire Scout and the Group 5, MQ-4 Triton. With a long history of unmanned aviation development, Navy UAS efforts are rather diverse, focusing on the next-generation Unmanned Combat Air System (UCAS), designed to prove an autonomous capability to launch from an Aircraft Carrier, to a variety of rotary wing UAS, designed to deliver supplies to deployed forces with little more than 5 minutes of operator training and a mobile tablet device.[105]

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[102] U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035*, Appendix D: UAS Organizations.

[103] Interview with AFSOC/A5K Staff members, January 7, 2015. Flown in support of United States Special Operations Command (USSOCOM).

[104] Although Marine programs fall under the Department of Navy, for this paper, the programs are separated based on differences in manning constructs.

[105] The Navy flew the first RPA, an N-9 named *The Wild Goose*, September 15, 1924 (see Angelina Long Callahan, "Reinventing the Drone, Reinventing the Navy (1919–1939)," *Naval War College Review* 67, no. 3 (Summer 2014): 98–122, https://www.usnwc.edu/getattachment/52d53799-ce32-4a36-bb08-

1. Applied Missions

With the combined effects of the surface fleet and Naval Aviation, Navy UAS can span from tactically focused missions to the strategic. The missions associated with these levels of warfare currently trend down the same lines associated with the UAS "Groups." For example the Navy's Group 2 ScanEagle maintains an extremely unit-level tactical focus, whereas the MQ-4C is used in a more regional/strategic role akin to its Air Force counterpart, the RQ-4. The Navy, similar to the other Services, applies UAS capabilities across each of its designated mission sets:

ASUW – Anti-Surface Warfare
ASW – Anti-Submarine Warfare
BAMS – Broad Area Maritime Surveillance
BDA – Battle Damage Assessment
C3 – Command, Control, and Communications
EOD – Explosive Ordnance Disposal
EW – Electronic Warfare
FP– Force Protection
ISR – Intelligence Surveillance, and Reconnaissance
LG – Logistics (Cargo Resupply)
MDA – Maritime Domain Awareness
MIW – Mine Warfare
OMCM – Organic Mine Counter Measures
RSTA – Reconnaissance, Surveillance, and Target Acquisition
STRIKE – Precision Strike

2. Employment Concept

The Navy, similar to the other Services, currently employs Groups 1–3 UAS via line-of-sight (LOS) control with forward-deployed forces directly supporting the surface fleet commander or associated ground force commander (mission dependent). Currently, the smaller Group 2/3 aircraft are primarily flown in support of the Naval Special Warfare Command (NAVSPECWARCOM), while the larger Group 4/5 aircraft are flown in direct support of fleet operations.[106] Many of these UAS are operated directly off of the surface fleet ships where UAS crews conduct both launch and recovery and mission operations. In contrast the larger Group 5, MQ-4C Triton uses a RSO model similar to that of the Air

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2425c045167a/Reinventing-the-Drone,-Reinventing-the-Navy--1919-.aspx; "Navy to Fly Drone Helicopters from Tablet App," *RT*, April 7, 2014, http://rt.com/usa/navy-aacus-helicopter-drone-941/).

[106] Interview with Navy UAS program staffers, January 9, 2015.

Force, with forward-deployed launch and recovery bases supplying aircraft for CONUS-based units to conduct operations.

3. Force Presentation Model: Uniformed Military

For Group 1 aircraft, the Navy operates in a similar way to that of the Air Force and Army, with individuals trained as an additional duty, operating in 1- and 2-man teams. These teams are typically security or Sea, Air, Land (SEAL) teams supporting their associated tactical element. For Group 2/3 aircraft, the Navy has relied primarily on contracted services, or in some cases individual augmentees from within the Service to perform duties while deployed.[107] For Group 4/5 aircraft, the Navy has adopted the Squadron as the primary force provider for UAS capabilities.

The Navy's rationale for using previously rated aircrew for Group 4/5 UAS is that it requires less training and that associated operating risk is reduced based upon their existing knowledge of aviation fundamentals and mission execution. In short, the Navy contends that it is less costly and presents less risk to use previously rated individuals. While the Navy has adopted the squadron model for its larger UAS, some unique characteristics are associated with its programs. For the Group 4 MQ-8B Fire Scout, the squadron is actually a helicopter squadron containing manned and unmanned aircraft. The operating concept for these squadrons is that naval aviators assigned to operate manned helicopters operate the unmanned helicopters as an additional duty. According to Navy personnel, the largest driver for this concept is bed space available on the ship.[108] Limited space equates to limiting resources, so the combination of crews flying similar missions, albeit with different platforms, makes logistical sense.

The Navy had a similar mindset when establishing its unmanned patrol squadrons (VUPs) operating the Group 5 MQ-4 Triton. However, rather than dual-qualifying their crews, pilots assigned to the VUP are solely focused on Triton operations during their assignment. The Navy does not take any new accessions into the program but rather sources it from other patrol squadrons (VP) flying similar missions in aircraft such as the P-8 Poseidon. Since all Group 4/5 UAS Naval Aviators come from a previous manned flying background, they all maintain a minimum of a BUQ-V/JMQ-B joint training level.

As discussed in Chapter 2, the Navy gave consideration to a flying WO program; however, after 6 years, this program was terminated in 2013 when it was deemed

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[107] Interview with Navy UAS program staffers, January 9, 2015. IAs come from within the Navy uniformed Service members (Officers) and are provided the training necessary to perform duties while on a particular deployment or sea rotation. These "particular duties" are not their primary duties, and, upon completion of their rotation, they return to their normal specialty. They currently represent approximately 10% of the force used.

[108] Interview with Navy UAS program staffers, January 9, 2015.

counterproductive to career progression goals of standing Navy programs.[109] In addition, while the Navy does have the LDO program, it does not currently include opportunities for naval aviators.[110]

4. Utilization of Contractors

As mentioned previously, the Navy has used service contracts for over a decade to obtain ISR capabilities using UAS such as the Group 2 ScanEagle. The contractor provided teams of four operators with unmanned aerial vehicles (UAVs), sensors, ancillary equipment, and support services. The teams were stationed on Navy ships and in combat zones on land. The use of service contracts was justified originally as necessary to meet an urgent operational need. From an operational standpoint, the results were reported as positive. Currently, the Navy is undergoing efforts to establish an in-house military infrastructure to operate and sustain the Group 3 RQ-21 Blackjack and to replace the primarily contracted Group 2 ScanEagle.

E. Marine Corps

Focused on the tactical employment of the Marine Air Ground Task Force (MAGTF), the Marine's UAS program consists primarily of Group 3 and smaller UA. Much like the Army, these systems are focused on tactical-level employment and direct integration with the supported ground force. Although the Marine UAS program is applied in a similar fashion to its ground counterpart in the Army, the programs have some differences in organizational structure. The Marine UAS program strives to ensure direct tactical support to the MAGTF while also ensuring complete integration with the larger joint force. Also, while the Marine UAS echelons depicted below describe the currently executed UAS program, the Marine Corps is looking at the maturation of Group 3 UAS to perform the missions/roles currently supported by the larger Group 4/5 aircraft. This effort shapes much of the way the Marines have staffed their UAS program.[111]

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[109] Mark D. Faram, "Flying Warrant Program Gets the Ax."

[110] U.S. Navy Website, "Limited Duty Office Designators," accessed September 17, 2014, http://www.public.navy.mil/bupers-npc/career/reservepersonnelmgmt/officers/Pages/LDOCWOCommunity.aspx. This website provides list of current LDO Designators. Naval Aviation is not included. Conjecture on the possibility for UA MOS LDO is that of the author.

[111] Telephone interview with Lt Col (Ret) Kenneth Briggs, HAF/A2CU, recently retired Marine UA officer, September 19, 2014.

Typical Marine UAS Echelons

Battalion-level and lower: Group 1
Regiment level: Group 2/3
Brigade/Joint Task Force: Group 4/5 (none currently in inventory)

1. Applied Missions

The roles of Marine UAS are not that different from the other Services' programs. Marine aviation doctrine summarizes UAS tasks as conducting ISR, target acquisition, and airborne surveillance for search and rescue and tactical recovery of aircraft and personnel; supporting vertical assaults (helicopter/tiltrotor); adjusting direct/indirect fire; and conducting battlefield damage assessments (BDAs).[112] The more recently published Marines UAS doctrine mirrors these tasks but also includes rear area security, training, and the ability to "provide a remote-receive station capability and liaison to designated units" (i.e., expand C2 communications).[113]

2. Employment Concept

Due to the tactical-level focus of the Marine UAS program, it is employed similarly to that of the Army—UAS pilots and operators deploy with and remain integrated with the overall MAGTF that they support. Like the Army concept, the goal is for the UAS operators to deploy with their home-station unit, thereby training in-garrison with those they will directly support during their deployment. All current UAS employed by the Marines are controlled via LOS communications; however, they are pursuing a BLOS capability for their Group 3 UAS.

3. Force Presentation Model: Uniformed Military

Group 1 UA are employed using the same two-man team concept as the other Services. Although trained to the joint standard, the Marines also view this two-man team concept as an additional duty and do not assign a special MOS for these smaller UA. However for Group 2 and Group 3, the Marines are organized into Marine unmanned air-

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112 U.S. Marine Corps, *Aviation Operations*, MCWP 3-2 (Quantico, VA: Marine Corps Combat Development Command, Doctrine Division, 9 May 2000), 2-8–2-9, http://www.marines.mil/Portals/59/Publications/MCWP%203-2%20Aviation%20Operations.pdf.

113 U.S. Marine Corps, *Unmanned Aerial Vehicle Operations*, MCWP 3-42.1 (Quantico, VA: Marine Corps Combat Development Command, Doctrine Division, 14 August 2003), 1-2, http://fas.org/irp/doddir/usmc/mcwp3-42-1.pdf. Note: While this doctrine is over a decade old, the mission sets and tasks remain apropos.

craft squadrons (VMUs) assigned under the Marine aircraft wing of a Marine Expeditionary Force (MEF). The VMUs are organized into self-sufficient detachments that include intelligence, support personnel, enlisted UAS operators, and officer UAS aircraft/mission commanders. These detachments are designed to be assigned to the combat aviation element of an MEU or larger MAGTF. The VMUs currently operate Group 3 RQ-7B Shadows and have begun receiving the RQ-21A Blackjack. They are organized as depicted in Table 7.

Table 7. VMU Table of Organization

	Officers			Enlisted			
	Operators	**Other**	**Total**	**Operators**	**Other**	**Total**	**Total[Note1]**
Squadron Headquarters	2	5	7	2	38	40	47
Shadow Detachment 1	2		2	8	39	47	49
Shadow Detachment 2	2		2	8	39	47	49
Shadow Detachment 3	3		3	8	40	48	51
SUAS Detachment A	2		2	9	15	24	26
SUAS Detachment B	2		2	9	15	24	26
SUAS Detachment C	2		2	9	15	24	26
Grand Total VMU[Note 2]	15	5	20	53	201	254	274

Source: MGySgt Donald D. Phillips, Washington DC: Headquarters Marine Corps, March 4, 2014.
Note 1: This column is the sum of the total columns under officers and enlisted.
Note 2: This row is the sum of the rows above it.

Much like the Army, when the VMU launches its aircraft, it balances the combat requirements with aircraft/crew availability. While each of the Shadow detachments are currently responsible for operating a single UA at a time, the larger Group 3 detachment is suborganized into three sections, each of which is responsible for a single UA operation. All of the detachments have a mix of operators, intelligence personnel, and support personnel, so these detachments can be somewhat self-sufficient when task organized into MAGTFs. The Marines do also have a reserve component VMU, which maintains a similar force structure.[114]

Marine UAS were initially operated primarily by enlisted personnel and supervised by commissioned Marine aviators; however, as the demand and associated role of the UAS expanded across the MAGTF, it was decided to employ more officers in the leadership. Combat lessons learned continued to mature the Marine concept of UAS operations as a permanently established career field. A Marine lessons learned report covering

[114] Interview with MGySgt Donald D. Phillips, Washington DC: Headquarters Marine Corps, March 4, 2014.

Afghanistan UAS operations[115] cited the lack of a UAS-specific MOS as degrading the community's capability to retain experience and corporate knowledge because augmentees from the manned aviation community departed after approximately a year and a half without returning to the UAS community for follow on assignments.

To address this challenge, the Marines, much like the Air Force, have since developed a specific UAS aircraft commander MOS. As the most recent FY15 UAS officer accession board announcement states, this effort is in line with "the larger UAS manpower strategy, focused on establishing a professional cadre of UAS officers."[116] Officers selected for this role actually attend the Air Force's Undergraduate RPA Training in Texas alongside their Air Force counterparts and then complete RQ-7 Shadow training from the Army training program.[117] The enlisted operators also attend the Army training program and initially are qualified as the air vehicle operator (AVO) (i.e., pilot). As their experience grows, they are further certified as mission payload operator (MPO) (equivalent to Air Force sensor operator).[118]

While enlisted operators are used to physically control Groups 1–3 UAS, officers fill the role of aircraft commander by planning and directing the mission, coordinating airspace, ensuring the integration with other airborne assets, and so forth.[119] Officers are initially qualified as an aircraft commander over a single mission, but, as their experience and capability increase, they are upgraded and certified as a mission commander with the ability to command several UA missions at once (all physically piloted by enlisted operators).[120] Since these UAS officers are graduates from the Air Force's Undergraduate RPA training course, they are all BUQ-IV qualified in accordance with CJCSI 3255.1. As the Marine Corps either matures its Group 3 capability into missions currently reserved for Group 4/5 (i.e., kinetic operations, strategic ISR, and so forth) and/or it acquires true Group 4 capability, these UAS officers will not only have prior experience, but will already be trained and qualified at the appropriate level to meet Chairman of the Joint Chiefs of Staff

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115 United States Marine Corps, *Unmanned Aerial Systems (UAS) Integrated Operations in Support of Regional Command Southwest (RC(SW))* (Quantico, VA: Center for Lessons Learned, 4 October 2011), 5, https://info.publicintelligence.net/MCCLL-UAS-RC-SW.pdf.

116 U.S. Marine Corps Website, "FY 15 Unmanned Aircraft System (UAS) Officer Primary MOS 7315 Field Accession Board 9–13 June 2014," MARADMIN 185/14 (April 8, 2014), http://www.marines.mil/News/Messages/MessagesDisplay/tabid/13286/Article/162217/fy15-unmanned-aircraft-system-uas-officer-primary-mos-7315-field-accession-boar.aspx.

117 Ibid.

118 There is no change in MOS. The AVO qualification is simpler than that of the MPO (pilots control Groups 1–3 with a "point-and-click" capability, while control of the sensor requires greater expertise).

119 Telephone interview with Lt Col (Ret) Kenneth Briggs, HAF/A2CU, recently retired Marine UA officer, September 19, 2014. In some cases, senior/experienced NCOs also fill the role of aircraft commander.

120 Ibid.

(CJCS) and FAA requirements. The importance of this career field is highlighted by the recent United States Marine Corps (USMC) Deputy Commandant for Aviation decision to capitalize on the EA-6B community by transitioning EW officers into this new UAS Officer MOS as the program moves toward its Fiscal Year (FY) 2020 sunset.[121]

F. Special Operations Command

With a wide range of global operations, the Special Operations Command (SOCOM) operates the widest diversity of UAS. Although SOCOM executes Service-like functions, much of its equipment and capability comes from that already inherent within DoD. As such, SOCOM UAS units are staffed in manner similar to those described previously. Although Group 1 is conducted by operators trained as an additional duty and Group 2/3 are primarily contract support (initial Navy model), SOCOM does have dedicated UAS organizations in both the 160th Special Operations Aviation Regiment (Army) and 27th Special Operations Wing (Air Force). All of these units are staffed in a manner similar to their general-purpose force counterparts. SOCOM also uses the previously mentioned GOCO UAS to support its operations. This support includes everything from the Group 2 ScanEagle to the Army's Group 4 MQ-1C Gray Eagle and Air Force's Group 5 MQ-9 Reaper.

G. Summary

Based upon the review of individual Services, it is revealed that for the majority of the UAS Groups, the Services staff their programs with similar categories of performers but with some notable differences. Table 8 provides an overview of category of performers for the pilots/air vehicle operators of each group. One notable difference is reliance of the Army on WOs to provide leadership within their Group 3/4 UAS units, whereas the other Services rely on officers above the rank of O-1.

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[121] Ibid.

Table 8. Service Category of Performer Summary (Pilots)

Group	Air Force	Army	Navy	Marines
5	70% RPA AFSC	N/A		N/A
4	70% RPA AFSC	18% W.O.		N/A
3	N/A	13% W.O.	~10% IA	22% RPA Officer
2		N/A		
1				

KEY					
Officer (RPA/UAS MOS)	Officer (other)	W.O.	Enlisted	DOD Civilian	Contractor

AFSC: Air Force Specialty Code, IA: Individual Augmentees

Note: This table summarizes the primary focus of those used to control the aircraft. The Air Force and Navy have approximately one-half their Group 4/5 UAS force as enlisted sensor operators.

The other major difference between Services is that while the Air Force and Marines have a dedicated Officer corps for UAS, the Navy and Army do not. The Navy relies on the use of previously qualified pilots from similarly tasked aircraft, while the Army relies on its WOs as previously discussed. Table 9., Table 10., Table 11., Table 12., and Table 13. summarize each of the Services by UAS Group.

Table 9. Summary of Group 1 UAS

GROUP 1		Mission						People								
Service	Aircraft	Apportionment Authority	Allocation Authority	Airspace Environment	Operating Area	Weapon Employment	Force Presentation	Category of Performer		BUQ LVL	JMQ LVL	UAS Specific MOS			Mixed MOS Pilot Force	Command Opportunities
								Pilot	Sensor			Officer	Warrant	Enlisted		
USAF	Raven/Puma	Unit CC	Restricted/Military < 1,200'	Local			Deployed	Enlisted		1	A			NO (Additional Duty)		
Army	RAVEN															
Navy	RAVEN															
USMC	RAVEN/Puma/ WASP															

N/A | Joint Majority | USAF Unique | Army Unique | Navy Unique | USMC Unique

Table 10. Summary of Group 2 UAS

GROUP 2		Mission						People								
Service	Aircraft	Apportionment Authority	Allocation Authority	Airspace Environment	Operating Area	Weapon Employment	Force Presentation	Category of Performer		BUQ LVL	JMQ LVL	UAS Specific MOS			Mixed MOS Pilot Force	Command Opportunities
								Pilot	Sensor			Officer	Warrant	Enlisted		
USAF	ScanEagle	JFC	JFACC	VFR, Combat, Class D, <18K	Regional	No	Deployed	Contractor		2	A					
Army																
Navy	ScanEagle	JFMCC	TF/CC	VFR, Combat, Class D, <18K	Regional	No	Deployed	Contractor		2	A					
USMC	ScanEagle	JFLCC	Brigade/CC					78% Enlisted 22% Officer	Enlisted	4	C	Yes		Yes	No	No Limitations/Barriers

N/A | Joint Majority | USAF Unique | Army Unique | Navy Unique | USMC Unique

Table 11. Summary of Group 3 UAS

GROUP 3																				
		Mission						People												
Service	Aircraft	Apportionment Authority	Allocation Authority	Airspace Environment	Operating Area	Weapon Employment	Force Presentation	Category of Performer		BUQ LVL	JMQ LVL	UAS Specific MOS			Mixed MOS Pilot Force	Command Opportunities
								Pilot	Sensor			Officer	Warrant	Enlisted		
USAF																
Army	Shadow	JFLCC	Brigade/CC	Regional	Regional	No	Deployed	87% Enlisted 13% Warrant	Enlisted	3	A		Yes	Yes		Highest = Company for Warrant
Navy	Blackjack	JFMCC	TF/CC					Contract ~10% IA Officers				No				
USMC	Shadow & Blackjack	JFLCC	Brigade/CC					78 % Enlisted 22% Officer		4	C	Yes				No Limitations/Barriers

N/A | Joint Majority | USAF Unique | Army Unique | Navy Unique | USMC Unique

Table 12. Summary of Group 4 UAS

Group 4																				
		Mission						People												
Service	Aircraft	Apportionment Authority	Allocation Authority	Airspace Environment	Operating Area	Weapon Employment	Force Presentation	Category of Performer		BUQ LVL	JMQ LVL	UAS Specific MOS			Mixed MOS Pilot Force	Command Opportunities
								Pilot	Sensor			Officer	Warrant	Enlisted		
USAF	MQ-1B	JFC	JFACC	ICAO	Theatre	Yes	Remote Split Operations, CONUS	Officer	Enlisted	4	C	Yes		Yes	Goal: 90% RPA AFSC	No Limitations/Barriers
Army	MQ-1C	JFLC	Div/CC	Military/ClassA	Regional		Deployed	82% Enlisted 18% Warrant			B		Yes			Highest = Company for Warrant.
Navy	MQ-8	JFC	JFACC/JFMCC*	ICAO				Officer				No			Exclusively Helo Pilots	No Limitations/Barriers
USMC																

N/A | Joint Majority | USAF Unique | Army Unique | Navy Unique | USMC Unique

Table 13. Summary of Group 5 UAS

Group 5			Mission						People								
	Service	Aircraft	Apportionment Authority	Allocation Authority	Airspace Environment	Operating Area	Weapon Employment	Force Presentation	Category of Performer		BUQ LVL	JMQ LVL	UAS Specific MOS			Mixed MOS Pilot Force	Command Opportunities
									Pilot	Sensor			Officer	Warrant	Enlisted		
	USAF	RQ-4	JFC	JFACC	ICAO	Theatre	No	Remote Split Operations (RSO), CONUS	Officer	Enlisted	4	B	Yes		Yes	Goal: 90% RPA AFSC	No Limitations/barriers
		MQ-9					Yes					C					
	Army																
	Navy	MQ-4	JFC	JFACC/JFMCC*	ICAO	Theatre	No	RSO CONUS	Officer	Enlisted	4	B	No		Yes	Exclusively Previously Rated	No Limitations/ barriers
	USMC																

N/A | Joint Majority | USAF Unique | Army Unique | Navy Unique | USMC Unique

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5. Service Staffing Business Rules

As seen in the last chapter, each military Service applies a unique "lens" to evaluating its individual requirements. While this approach is anticipated and arguably necessary for a functionally defined military Service, these programs shows some basic commonality that does not necessarily arise from the earlier reviewed statutory guidance. These common practices, referred to from here on as "business rules," are built upon lessons learned, best practices, and, in some cases, the application of commonly accepted cultural perceptions, which shape how and why programs are designed and the manner in which they operate. In other cases, the Services vary vastly between how they present UAS forces. In some cases, the following business rules may seem rudimentary and already addressed in the statutory guidance; however, this analysis aims at capturing commonalities that apply universally to the Services, not Service-unique characteristics described in the previous chapter. This paper does not endorse any of these particular business rules, but rather outlines which business rules are currently in place and provides discussion on any potential implications.

A. Military Incumbency

Statutory guidelines clearly state that the determination of an IG function requires a thorough analysis of the mission and associated risk. If the member is expected to raise arms against an enemy force as part of his/her role, then military incumbency is required.[122] Using this thought process, members assigned to Army maneuver units must be military members since they are expected to move and fire along with the organic force they support. By applying the Marines ethos of "every Marine is a Rifleman," one can also see where the Marines drive military incumbency by the very expeditionary nature of their Service. One can even make a case that the Air Force applies this business rule to the preponderance of their forward-deployed launch and recovery elements (LREs). At a minimum, this concept is applied to the Air Force SOCOM alert-capable launch and recovery force, which requires military personnel to meet the potential instantaneous deployment and subsequent movements required by the nature of their operation.[123]

With this in mind, the first business rule common across all Services is as follows:

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[122] This rule does not include self-defense situations.

[123] Input from AFSOC/A5K subject matter experts (SMEs) during RPA Manpower Working Group meeting January 7, 2015.

UAS operators assigned to a combat maneuver unit must be uniformed military personnel.

While this rule holds true for smaller UAS operators, a counterpoint is possible to this rule because most of today's larger UAS operations occur within the confines of a secure location. This argument contends that because UAS tend to operate from secure forward-operating bases, it is the unit they support that maneuvers throughout the battlespace, not the UAS operators. The larger UAS systems inherently require increased infrastructure, and, therefore, their associated mobility decreases incrementally with the size of the operation. While this situation holds true for current operations, this business rule is still applicable based upon programming for a force that meets the missions tasked to a particular unit, not necessarily the missions or operating environment in which the unit currently finds itself. As discussed later in this chapter, technology maturation may also affect how systems are employed, which would further enable UAS operators to embed with their associated supported units if so desired.

B. Civilians

While research noted several cases in which DoD employed either GOCO or contractor-owned, contractor-operated (COCO) service contracts for UAS operations, at no point did the team come across an incident in which a DoD civilian piloted and/or operated full-motion video sensors for a UAS program leading us to the first observation:

DoD civilians are not used to operate UAS.

While DoD civilians are sometimes heavily involved in support functions (i.e., as full-motion video analysts), they are not involved in physical control of the aircraft. While it appears that the Services have applied the "military incumbency" rule to their own UAS programs, the utilization of contractors across the DoD UAS enterprise implies a comfort level allowing civilians to operate these systems; therefore, this paper will not discount the use of DoD civilians in the analysis of alternatives that follows.

C. International Airspace

Applied primarily to the larger Group 4/5 UAS, each Service uses officers to control operations within international airspace. Although not specifically dictated, the Services appear to have determined that the scope of responsibility associated with the remote integration of an aircraft within the international civilian airspace infrastructure aligns with the additional level of responsibility inherent within the officer corps.

"Officer equivalents" are required for UAS operations within international airspace.

Although this rule applies across all Services, the focus on the level of resources applied to a specific UAS Officer corps by a Service does reflect its overall mission focus. As outlined in Chapter 4, the Air Force is responsible for responding globally and must have pilots who can operate within all environments, regardless of airspace structure. As such, their entire Group 4/5 pilot force is comprised of officers (greater than or equal to the rank of O-1). The Navy's sea-basing construct and support to the fleet has a similar requirement, thereby similarly shaping its force. While the largest UAS for the Marines is a Group 3, it is expeditionary in nature and must be prepared to operate within locations before a formal military restricted airspace structure has been established. In contrast, while the Army does indeed use WOs for its Group 4 UAS, its UAS program is focused on support to larger general-purpose forces that tend to establish operations after such airspace infrastructures are in place, thereby not requiring the extensive level of officer participation inherent in the other programs.

The term "officer equivalent" is used for this business rule because there are examples of contracted UAS programs that operate within international airspace and have no restrictions on DoD civilians doing the same. In many ways, this situation is similar to those major civil airlines that require pilots to have a bachelor's degree even though this level of education is not an overall FAA/IACAO requirement. The "officer equivalent" term is used to illustrate the level of responsibility with this position.

As a final note, although this business rule appears to apply only to the larger UAS, as technology and capabilities mature, it will also become applicable to smaller UAS.

D. Sensor/Mission Payload Operator

A commonality across each of the Services is the use of enlisted members as sensor operators. Much like the "officer equivalent" term used previously, enlisted equivalency is phrased to incorporate the level of authority and responsibility applied across both military and contract applications.

UAS sensor/mission payload operator positions are sourced solely with "enlisted equivalents."

E. Precision-Guided Munitions (PGMs)

While military members of all ranks within each of the Services may be called upon to raise arms in support of our nation's defense, the Services have demonstrated that the application of PGMs in warfare brings a responsibility commensurate with the leadership and authority our nation entrusts to our commissioned military officers:

Military officers are required for release authority of PGMs.

As described in 2005 by Professor Michael Schmitt from the George C Marshall European Center for Security Studies, the application of PGMs during Operation Iraqi Freedom demonstrated that the interpretation of international humanitarian law is increasingly complicated for those employing such munitions.[124] Schmitt tells that great care was taken in conducting collateral damage assessments and that if estimates for civilian casualties were projected to increase over a certain threshold, the mission needed Secretary-of-Defense approval.[125] As Schmitt contends, "While there is no legal requirement for higher-level approval as collateral damage or incidental injury grows, the United States recognized that American precision capabilities meant it would be judged harshly for causing harm to civilians and their property."[126] Such an example illustrates the need for the authority which resides within the officer corps.

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[124] Michael N. Schmitt, "Precision Attack and International Humanitarian Law," *International Review of the Red Cross* 87, no. 859 (September 2005): 445–466, https://www.icrc.org/eng/assets/files/other/irrc_859_schmitt.pdf.

[125] Ibid., 457–458.

[126] Ibid., 458.

While this business rule associated with PGM release authority applies across all Services (and beyond employment of UAS), the Services, as is typical, take independent approaches. For the Army, who views its UAS as an integrated weapon within its maneuver force, PGM release authority is applied through the ground force commander, and that authority is employed under the leadership provided by commissioned WOs within the larger UAS program. Although the Marines' organic UAS do not currently employ a PGM weapons capability, its force structure is designed to accommodate such operations with a dedicated UAS officer corps operating as mission commanders over their operations. For the Air Force, which operates most of the PGM-capable UA, release authority may not always come from a ground force commander. For example, a strike coordination and reconnaissance mission may have a list of nominated targets that will require the aircraft commander to make the final targeting and release authority determination. Senior leaders within the Air Force RPA community contend that for cases in which the pilot is responsible for interpreting the commander's intent, it is necessary to balance the tactical objectives against strategic implications rather than simply follow orders to employ. The Air Force contends for its assigned missions that this decision increases the level of responsibility commensurate with that of an officer.

F. High Cost/Demand, Low Density Assets

Throughout research for this topic, several individuals raised the issue that the cost of larger Group 4/5 UAS drive the requirement for officers as pilots. While this paper found no direct linkage to statutory guidance directing such a requirement, the application of manpower to aircraft does support this conclusion and has thus been included as a current business rule:

Cost of airframes and the high-demand, low-density (HD/LD) nature of large UAS compel the use of officer pilots.

The larger UA, although often thought of—and in some mediums referred to—as disposable are anything but. Pairing the costs of the aircraft and associated systems with the ongoing insatiable demand for their support classify these aircraft as extremely valuable, HD/LD assets. In many cases, in the event of a UA crash, combat rescue teams have been deployed to recover components from the crash site.[127] Such incidents seem counter-intuitive since this deployment if rescue teams places humans at risk within a combat zone to recover parts from an uninhabited system.

[127] Research Team members' personal experiences.

For an order of magnitude on associated costs, estimate places the RQ-4 Global Hawk around $120 million. Thus, it is easy to understand that the responsibility for operating such a platform should be akin to the authorities and accountabilities associated with a military officer. However, the counterpoint to this business rule seeks the answer to an important question: what exactly is the cut-off value for such a determination? The Air Force's MQ-9 is valued at approximately $12.5 million, and the MQ-1B is valued at approximately $4.5 million. As discussed previously, the Air Force operates both UA with officer pilots, yet the Army's similar MQ-1C program includes enlisted pilots.[128] For a comparison to another weapons system, one estimate places the cost of the Army's Abrams tank at $7.5 million. The Abrams tank is operated by enlisted and junior officers. Another dynamic associated with this discussion comes in light of the HD/LD nature of these assets. While the MQ-1B Predator is not "expensive" (in terms of major military weapons systems), the fact that it is no longer being produced drives a limited supply of resources among a continuing increase in requirements, thereby playing a role in this business rule of high-cost HD/LD assets requiring the level of accountability inherent within a military officer.

G. Summary

In looking at the commonalities between the Services, the six business rules in Table 14 appear universally across the Services and are platform agnostic. Having defined the commonalities and associated business rules currently in place, analysis will now turn toward the discrepancies within the Service's workforce mix strategies.

Table 14. Business Rules for UAS Staffing

1	UAS operators assigned to a combat maneuver unit must be uniformed military personnel.
2	DoD civilians are not used to operate UAS.
3	"Officer equivalents'" are required for UAS operations within international airspace.
4	UAS sensor/mission payload operator positions are sourced solely with "enlisted equivalents."
5	Military officers are required for release authority of PGMs.
6	Cost of airframes and HD/LD nature of large UAS compel the use of officer pilots.

[128] Army enlisted UA pilots are referred to as air vehicle operators.

6. Additional Observations of Service Staffing Practices

While the business rules define the common practices across UAS programs, Table 9., Table 10., Table 11., Table 12., and Table 13. (see Chapter 4) demonstrated significant differences in terms of category of performer determination. The following analysis provides a view into why these differences exist. Once again, rather than endorsing any of the Service's particular approach, this chapter outlines the differences and provides observations that could affect future workforce staffing decisions.

A. Officer vs. Enlisted Pilot Decision Process

The most commonly debated and discussed staffing decision within DoD's UAS enterprise is the difference between the Army's use of enlisted pilots and the Air Force's use of officer pilots for Group 4 UAS.[129] As seen in Chapter 4, and once again in

Table 15., the majority of the UAS enterprise is staffed similarly, with the Group 4 officer/enlisted paradigm being the major difference. Rather than skirting the obvious, the following subsections analyze elements of this decision process to describe the related rationale and to provide context and/or possible areas for alternate strategies in the future.

1. Cultural Impacts: Air Force

During research, some raised the point that a cultural aspect was behind the Services' category of performer selection, primarily the officer vs. enlisted decision. The Air Force is focused on the command and execution of air combat and is responsible for most of the larger UA within DoD. As described in Chapter 4, the Air Force contends that its global mission and decentralized execution model require a pilot who has the decision-making authority inherent of an officer. This belief is deep-seated within Air Force culture and can be traced back to the Air Corps act of 1926, which legislated that "at least 90 per centum of the officers in each grade below that of brigadier general shall be flying officers."[130]

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[129] Although the Navy's Group 4 UAS helicopters play a much smaller role, they are often left out of this discussion even though officers are also used in this role.

[130] Air Corps Act of 1926, § 721, 69th Congress, accessed on September 8, 2014, http://legisworks.org/congress/69/publaw-446.pdf. The same legislation also directed that "in a time of peace, not less than 20 per centum of the total number of pilots employed in tactical units of the Air Corps shall be enlisted men." Although the Air Force did indeed have enlisted aviators, in May 1957, the last enlisted aviator, MSgt George Holmes, retired.

Table 15. Service Category of Performer Summary (Pilots)

Group	Air Force	Army	Navy	Marines
5	70% RPA AFSC	N/A		N/A
4	70% RPA AFSC	18% W.O.		N/A
3	N/A	13% W.O.	~10% IA	22% RPA Officer
2		N/A		
1				

KEY					
Officer (RPA/UAS MOS)	Officer (other)	W.O.	Enlisted	DOD Civilian	Contractor

AFSC: Air Force Specialty Code, IA: Individual Augmentees

Note: This table summarizes the primary focus of those used to control the aircraft. The Air Force and Navy both have approximately one-half of their Group 4/5 UAS force as enlisted sensor operators.

The Air Corps Act was designed to transition the Army Air Service into a more independent branch to strengthen "the conception of military aviation as an offensive, striking arm rather than an auxiliary service."[131] From this ingrained culture of "air mindedness," the Air Force aims to develop senior leaders who are focused on the employment and empowerment of airpower. Ensuring that the leadership pool is focused on aviation, current regulations mimic the days of the Airpower Act by directing "only Line of the Air Force crewmembers occupying active flying positions can command flying organizations."[132] This concept applies directly to the Air Force RPA officers in way that is similar to that of mobility and/or fighter pilots. To develop senior leaders who have

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131 Air Force Historical Support Division Website, "1926 -- The U.S. Army Air Corps Act," accessed September 8, 2014, http://www.afhso.af.mil/topics/factsheets/factsheet.asp?id=15237. It is within this legislation that is was first decried that "Flying units shall in all cases be commanded by flying officers."

132 Department of the Air Force, "Appointment to and Assumption of Command," AFI 51-604 (Washington, DC: Secretary of the Air Force, 4 April 2006), 7, http://static.e-publishing.af.mil/production/1/af_a3_5/publication/afi51-604/afi51-604.pdf. In terms of regulatory guidance, Air Force Instruction (AFI) 11-401, "Aviation Management," and AFI 11-402, "Aviation and Parachutist Service," Aeronautical Ratings and Aviation Badges, make references and list requirements for the rated commissioned officer force. While one paragraph (2.2.1) in AFI 11-402 references a Title 10 authority dictating that "the USAF may award aeronautical ratings to USAF commissioned officers only," this Title 10 reference (Title 10 U.S.C. § 8691 actually states that "Only officers of the Air Force in the following categories may be rated as flying officers." Title 10 U.S.C. § 8691 then lists those who have and/or are receiving some level of flight-related training.

extensive knowledge and experience employing RPA, those officers must not only execute such operations as a young officer, but also develop throughout their career to appreciate the operational and strategic leadership required to ensure appropriate application of RPA within the nation's application of airpower.

The Air Force also contends that the foundational airpower model of "centralized control, decentralized execution" drives decision-making authority for individual missions into the hands of front-line pilots and therefore is reliant on officers (more on this in subsequent sections). This point was articulated in a 2010 Air Force report on a similar topic, where the author uses the charts in Figure 4a and Figure 4b to depict the difference between Air Force (blue) and Army (green) UAS operating concepts.

Recently, an Air Force RPA working group updated Figure 4 and delineated between the complexity of a system and the responsibility required to operate the system. Through discussions with the working group, this update was an attempt to show that it is possible to spend time and money to train individuals to an appropriate level for execution (pilot vs. operator). However, this particular working group contended that the true determinant in selecting an officer lies in the scope of responsibility required by the pilot (in the working group's case, an officer when talking decentralized execution). Figure 5 depicts the updated chart.

2. Cultural Impacts: Army

The Army's cultural history with enlisted aviators is also traced to the Air Corps Act of 1926, however the Army took a substantially different path than the AF by focusing on enlisted aviators. While the Air Corps Act directed a heavy officer force for the AF, it also directed that "in a time of peace, not less than 20 per centum of the total number of pilots employed in tactical units of the Air Corps shall be enlisted men …."[133] This practice was eventually ended by a War Department order that mandated that all prior enlisted aviators would to be promoted to second lieutenants by 17 November 1942.[134] The introduction of the helicopter into the Army once again drove a dramatic increase in the number of pilots required; however, the congressionally imposed officer force level prevented this expansion.[135]

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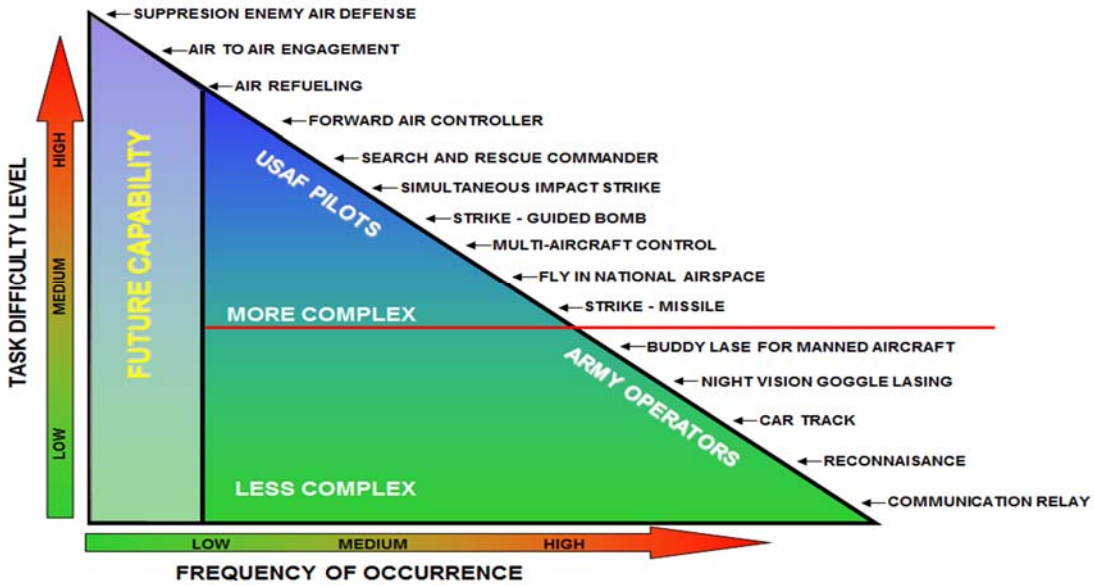
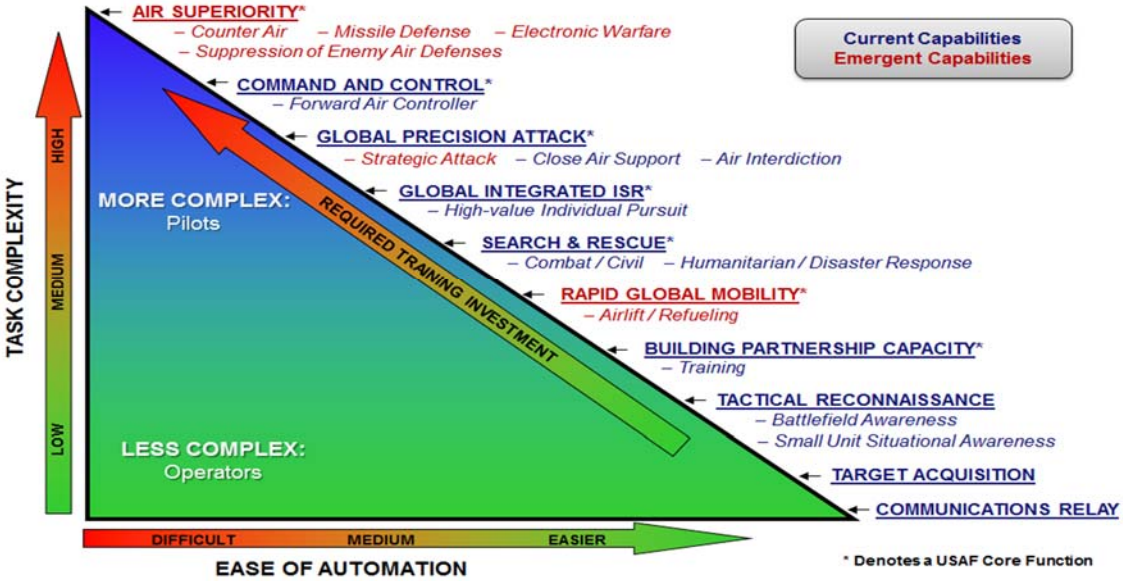
[133] Air Corps Act of 1926, § 721, 69th Congress, accessed on September 8, 2014, http://legisworks.org/congress/69/publaw-446.pdf.

[134] National Museum of the Air Force Website, "End of an Era," accessed September 10, 2014, http://www.nationalmuseum.af.mil/factsheets/factsheet.asp?id=1425. Actually took two additional years to fully promote all Army Enlisted Aviators.

[135] Warrant Officer Historical Foundation Website, "History of the Army Aviation Warrant Officer," accessed September 10, 2014, https://warrantofficerhistory.org/Hist_Avn_WO.htm.



(a)



(b)

Source: Major Travis Burdine, USAF, "The Army's 'Organic' Unmanned Aircraft Systems: The Unhealthy Choice for the Joint Operational Environment," *Air and Space Power Journal,* Summer 2009. http://www.au.af.mil/au/afri/aspj/airchronicles/apj/apj09/sum09/burdine.html.
Note: At the time this Air Force report was published, the Army was not using its Group 4 UAS operationally as a strike asset (although it was capable).

Figure 4. UAS Capability Envelope (2010 Air Force Charts)

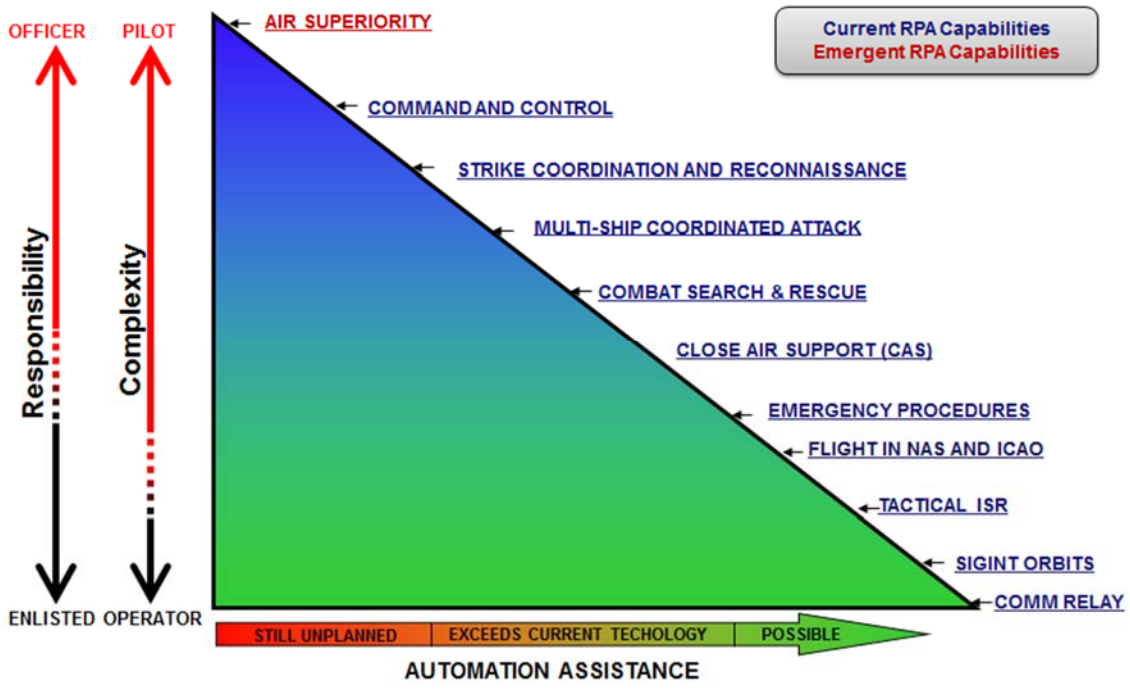


Figure 5. Air Force RPA Working Group Aircraft Capability Envelope (2015)

The solution was WO pilots, whose separate MOS was subsequently approved in 1949. Although the program has evolved in many ways, the Aviation Warrant Officer continues to form the backbone of Army aviation.[136]

An additional cultural perspective is observed in how the Army views the aircraft and crews themselves. As alluded to previously, the tactical nature of the Army's application lends itself to crews being used by Commanders in a similar fashion as their other organic maneuver and fires assets (simply another "tool in the toolbox"). In this role, they are directed where to be and what to do by superiors. This approach is in contrast to the decentralized execution method of the Air Force, where RPA pilots are tasked to support potentially several units during the length of the sortie and are responsible for deciding how to best deliver the desired effects rather than being instructed on what exact steps to take. Thus, where the Air Force extends its pride of pilot's aviation culture/mindset to the RPA community, the Army views the UAS crews as "operators" not pilots (hence, their MOS duty title of Unmanned Aircraft System Operator). Although the Army UAS crews are awarded "wings," this cultural perspective was highlighted at the inaugural ceremony at which aviation badges were awarded to UAS crews by the then-UAS training Battalion

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136 The Army conducted an Enlisted Aviator Study in 1986. This study determined that creating an enlisted aviator was possible but would not be desirable because the leadership role of the WO would be lost (see Warrant Officer Historical Foundation Website, "History of the Army Aviation Warrant Officer," accessed September 10, 2014, https://warrantofficerhistory.org/Hist_Avn_WO.htm). The 1986 study is available within the Pentagon's library. Location information is provided at http://www.worldcat.org/title/1986-enlisted-aviator-study/oclc/17943829.

Operations Officer, Captain Kyle Duncan, who stated, "They deserve this recognition. They are not pilots, but they are operating in theater, in aviation, and they're working with rotary aircraft, fixed wing aircraft, with naval, Marine and Army Aviation. They are not getting an aviator's badge; they are getting an aviation badge. We recognize them for their work, as part of aviation."[137]

Based on the analysis of these two individual Service cultures, it is apparent that

Service culture shapes how the roles and responsibilities are viewed for individual category of performers.

3. Visualization Model

In the decision tree introduced in Chapter 2, when determining which category of performer to use, the model depicted stopped simply at "Uniformed Military." Obviously, this decision matrix continues on to include officer and enlisted, along with the previously mentioned officer subsets, as shown in Figure 6.

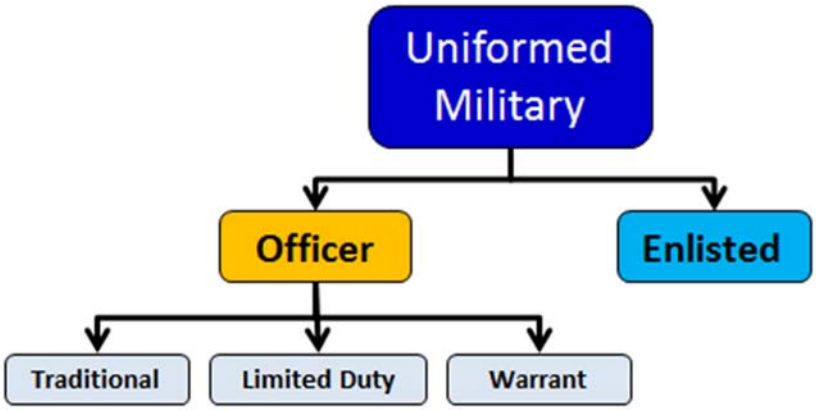

Figure 6. Uniformed Military Category of Performers

[137] Rob Martinez, "Policy Makes UAV Operators Eligible for Aviation Badge," *www.army.mil*, May 7, 2007, accessed October 10, 2014, http://www.army.mil/article/3012/New_Policy_Makes_Soldier_UAV_Operators_Eligible_for_Aviation_Badge/.

In reviewing the business rules and observations addressed in Chapter 5, it is apparent that the Services' staffing methodologies are driven more by the scope of mission tasked than by the physical characteristics of the aircraft being flown. While this approach is hardly a revelation for those familiar with military history, it is important to highlight this context when looking at staffing methodologies—specifically, when assessing the often emotional discussion over the use of officer vs. enlisted in UAS operations. While the previous Air Force figures attempted to show this complexity, analysis proves that the model is too simplistic. As the updated RPA working group figure (see Figure 5) shows, one can train to any level, but the aspect of "responsibility" plays a significant role in whether an officer is required. When looking at this issue from a non-Air Force perspective, when an officer's authority is required, it is injected appropriately. For the Army, this authority comes in the form of centralized execution and tasking, and, for the Marine Corps, it comes from the Mission Commander. The difference between the three Services in this case is frequency of need, operating environment, and delegation of risk assumption.

As alluded to previously, complexity also plays a role in determining staffing—whether it is the complexity of the system or the complexity of the operations involved. In simple terms, the more complex it is to operate an aircraft, the more likely it is to require an "officer equivalent" to pilot.[138] This same relationship is seen within the civil sector, where international commercial airlines require a bachelor's degree and continuing education for their pilots, while general aviation enthusiasts and some regional carriers do not require a degree to fly simpler aircraft within less congested airspace. When combining these concepts with those discussed in the mission element, business rule, and observation analyses, one can distill the officer vs. enlisted staffing methodology into three major aspects: (1) system complexity, (2) risk assumed, and (3) operational environment.

Figure 7 illustrates the relationship between these events while also showing some of the attributes associated with each axis. This characterization helps to put the analysis of current Service practices and business rules into context and shows how

DoD-assigned missions/responsibilities and the anticipated operating environment shape how the Services view the role of their UAS.

[138] This statement does not imply that enlisted are incapable of working complex systems. It is simply an acknowledgement that the officer corps is more likely to be vetted and trained to include individuals who are capable of the increased complex problem-solving skills associated with analytical thinking.

To illustrate this point, we will review two examples: (1) the relationship between the Air Force and Army's MQ-1 programs and (2) the Marine Corps' Group 2/3 staffing methodology.

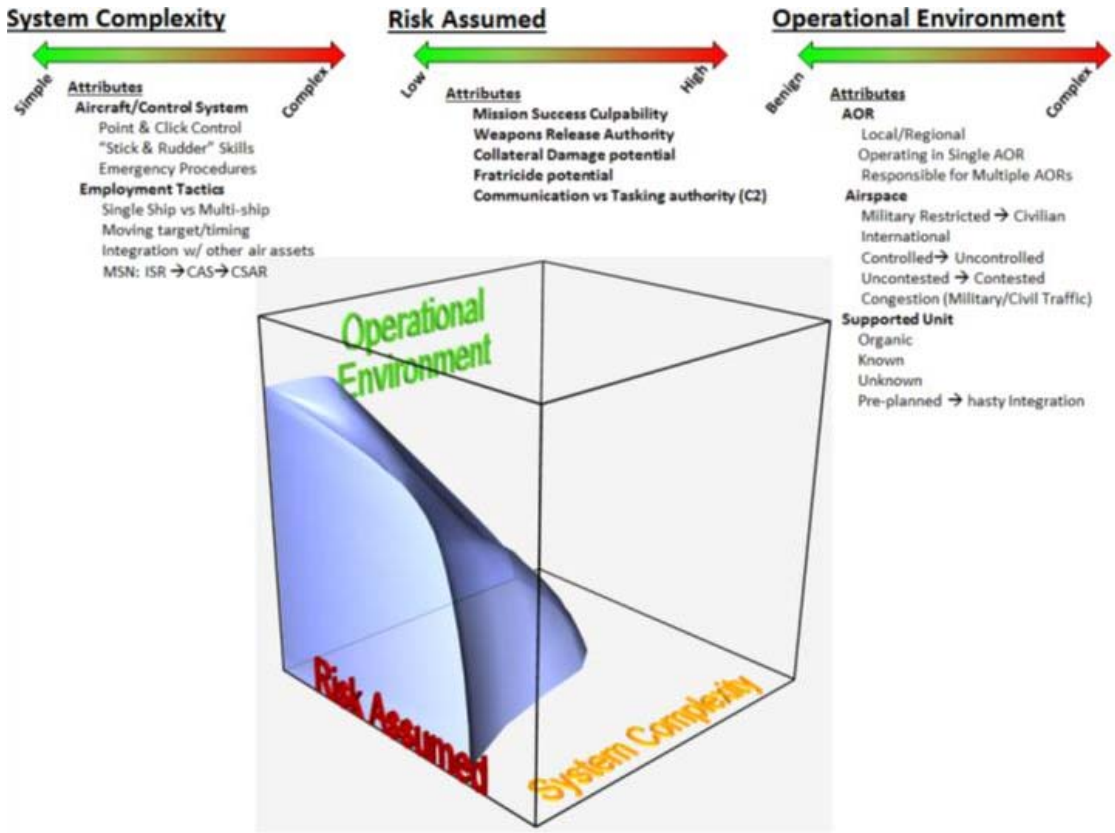

Figure 7. Complexity, Risk, and Environment Relationship

In the first example, the Air Force and Army operate MQ-1 variants yet have different staffing methodologies. The Air Force contends that an officer is required because of the associated mission risk and operational environment, which includes elements such as international/uncontrolled airspace and weapons employment. In addition to these risk factors, although the MQ-1B has basic autopilot features, complexities still exist with this relatively early generation UAS. As shown in Figure 8, this situation places MQ-1 B operations within the region that warrants the use of an officer when aircraft control complexities are combined with the level of risk assumed. In contrast, in the Army's view, its tactically focused, lower risk, regionally isolated operations with centralized control and execution are consistent with the reliance on enlisted operators led primarily by WOs. In addition, the newer MQ-1C variant provides increased autonomy associated with aircraft control (point and click vs. stick and throttle). As seen in Figure 8, this combination of mitigating risk through the combination of technology, operating environment, and operating concept enable an enlisted force structure supporting the Army's MQ-1C operations.

In the second example, the Marine Corps has used a similar combination of technology, operating environment, and concept of operations (CONOPS) to mitigate risk and reduce its manpower costs. As discussed previously, the Marine UAS program is designed to support the expeditionary nature of the MAGTF.

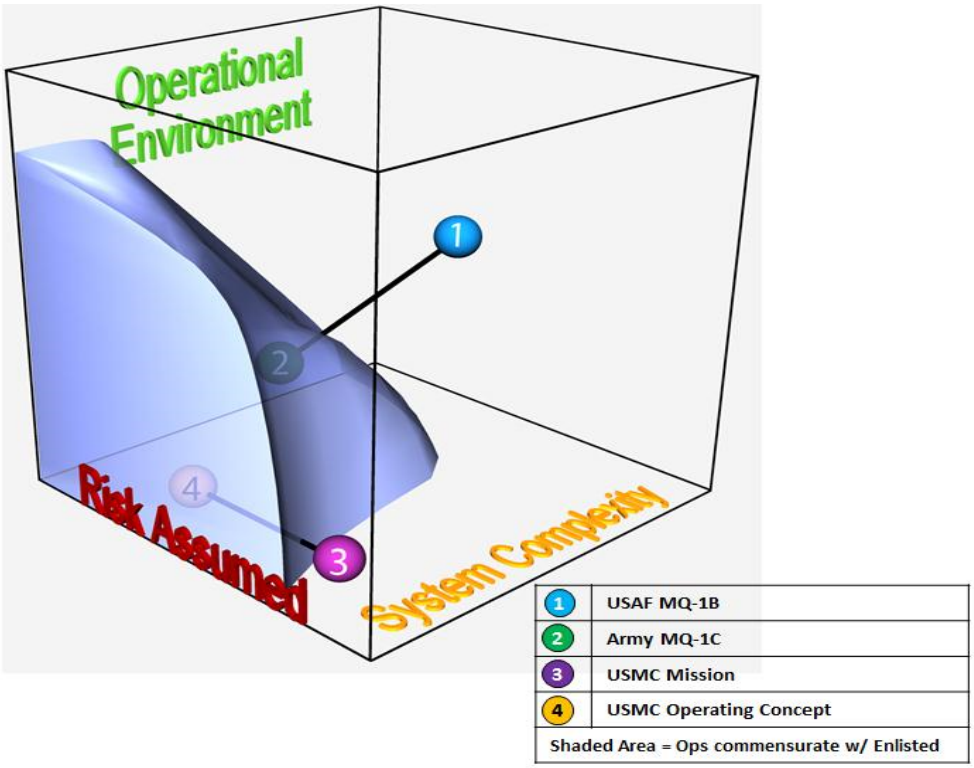

Figure 8. Illustrative Examples: Complexity vs. Risk

Therefore, the program must be able to respond in highly complex operating environments and with little notice, thereby increasing the mission risk to arguably high levels (depicted as "USMC Mission" in Figure 8). The Marine Corps program addressed these issues through a combination of technology and CONOPS. All of the current Marine UAS are relatively simple to operate and do not require an understanding of complex aeronautical concepts to operate or extensive problem solving to address failures. This fact alone makes the operation of the Marine UAS program much like the Army SUAS program, which uses enlisted operators in medium-to-low risk missions. However, as discussed, the anticipated operating environment increases the mission risk of the Marine UAS program. By creating a UAS-specific officer MOS and placing these officers in mission commander roles over the enlisted operators, the Marines feel that they are able to mitigate risk to a level acceptable for enlisted pilots. While the pilots handle the relatively simple task of aircraft control, the officer is responsible for airspace coordination and integration with the overall battle scheme of maneuver. The Marines built their program upon this risk-mitigating operating concept to ensure that the program was unbound by aircraft. While current

Marine platforms are easy to operate, the Marine force presentation model is designed to support developments similar to those found currently in Group 4 UA, such as long endurance, BLOS control, and weapons employment.[139] As long as the complexity of control remains manageable (i.e., simple), the UAS officer mission commander is responsible for mitigating risk to acceptable levels. In cases where the risk may prove to high (e.g., complex weapons employment in urban scenario), the Marine UAS Officer is qualified and capable of operating the aircraft himself/herself.

4. C2 Operating Concept

As alluded to previously, the rationale behind the Group 4 UAS staffing differences includes not only cultural perspectives, but is also affected by the respective C2 CONOPS applied. The Army contends that the UAS is an organic asset to be tasked and immediately responsive to the ground force commander (centralized control, centralized direction for execution). The Air Force centrally manages tasking aircraft to requirements but requires its crews to determine the best method of support to the commander (centralized control, decentralized execution).[140]

The C2 concept of UAS operations (centralized vs. decentralized) and resultant authority required by aircrew relate directly to officer vs enlisted decision.

B. Designation Practices Regarding Military Personnel

During the maturation of the Service UAS programs, each Service has developed unique organizations and specialty personnel codes to identify those who operate these systems. While UA operations have been ongoing in some form for over 80 years, the development of unique UAS organizations is much more recent. The Army has a long history of operating UAS, and, in terms of "modern" UAS, it started operating with the Pioneer as early as 1985. The Army has had a unique UAS MOS since at least 1993; however, in 2007, the MOS changed from one inside the intelligence branch to one within aviation. Like the Army, the Marine Corps' rich history with UAS led to the establishment of the first UAS Company in 1987 (later developed into a full squadron, VMU-1, in 1996).

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139 Telephone interview with Lt Col (Ret) Kenneth Briggs, HAF/A2CU, recently retired Marine UA officer, September 19, 2014.

140 As articulated in Major Travis Burdine, USAF, "The Army's 'Organic Unmanned Aircraft Systems: The Unhealthy Choice for the Joint Operational Environment," *Air and Space Power Journal*, Summer 2009, http://www.au.af.mil/au/afri/aspj/airchronicles/apj/apj09/sum09/burdine.html.

While the Marines have always had enlisted operators, the maturation of the career field led to the establishment of an officer UAS MOS in 2013. The Air Force established the first RPA squadron (11 RS) in July 1995 and initially established an AFSC designating an RPA pilot. Then, in 2009, it established the pipeline training and AFSC for those pilots who had not previously flown in other aircraft and were selected and assessed purely for RPA operations. A unique Air Force Sensor-Operator AFSC (previously filled by imagery analysts) was also established in 2009. Finally, the Navy has established unique enlisted classifications to designate those involved in UAS operations; however, unlike the other Services, it relies on accessions from those pilots who have flown other aircraft. Figure 9 shows a summary of the unique personnel identifiers across the Services.

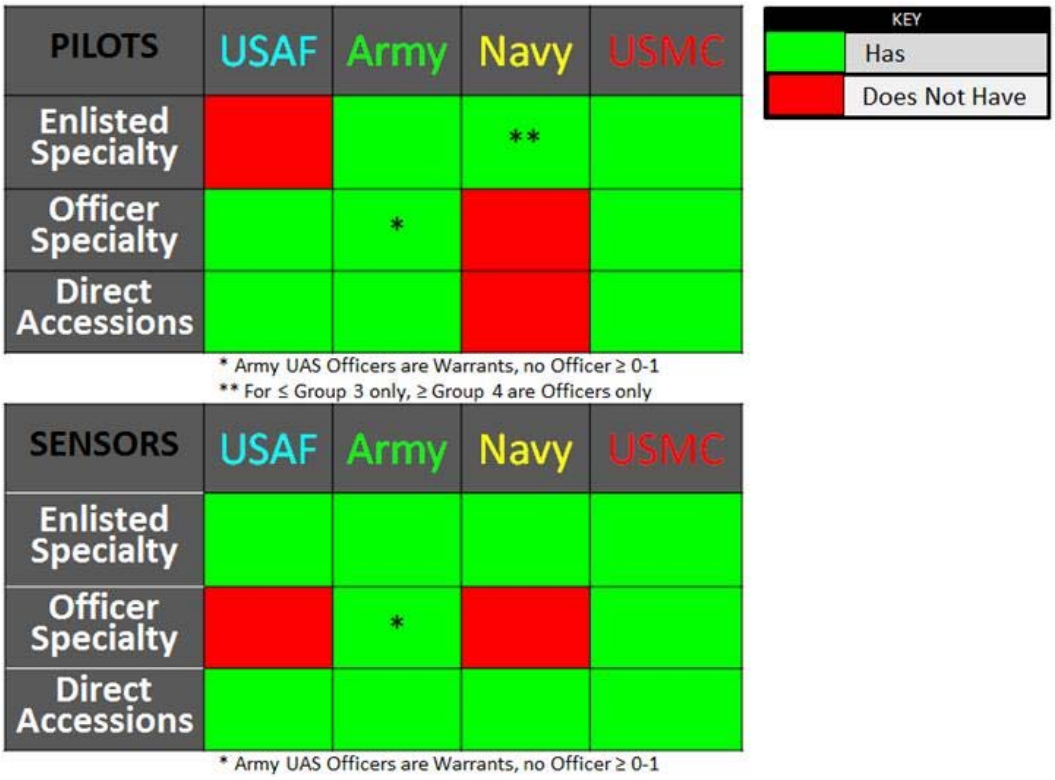

Figure 9. Unique UAS Personnel Identifier Summary

This discussion has highlighted the major similarities across the Services, with a few exceptions. The Navy and Air Force officer pilots are not formally trained to operate the associated UAS payloads, whereas the Army and Marine Corps pilots are qualified on the whole system. For the Marines, this decision is attributable to the simple nature of the platforms used. The Army, for its part, does not have a unique identifier for those officers whose rank is greater than or equal to O-1. The WOs are trained much like their Marine counterparts—to operate as technical experts on the entirety of the weapons system. However, that sentiment may be changing within the Army. The recent Army UAS Roadmap, when outlining the program's mid-term goals (2016–2025), expresses the desire

to develop an officer UAS corps as a portion of its force. To address the rapid technological advances and increased autonomy associated with UAS, the roadmap stresses that such advances "do not replace thinking leaders capable of dealing with a wide variety of threats spread across the spectrum of operations."[141] To further develop leaders who would be ready to address such challenges, the roadmap decrees that "**the Army should establish a commissioned officer UAS career track** or an additional skill identifier."[142]

The Army stated the need for commissioned officer UAS career track or an additional skill identifier.

While these differences have been noted throughout this paper, the Navy is the only Service to limit the piloting of their Group 4/5 UAS to those pilots who have flown other aircraft (see Table 12 and Table 13).

The Navy is the only Service that does not allow direct accessions to perform Group 4/5 pilot duties.

In discussion with Navy staff, the rationale for not allowing direct accessions has centered on risk and training costs. The contention is that prior training, in aircraft operations and similar mission tasks (e.g., P-8), reduced risk in comparison to training someone who has never flown in a manned platform. It was also stated that this was a less costly model since additional training was not required for a new and unique cadre of personnel. However, this model is true only if the need to fill UAS pilot slots does not create an increase in rated officer requirements across the Navy. The assumption is that the rated officers filling the UAS roles are taken from non-flying-related shore duty assignments. Additional analysis is recommended for the Navy to determine whether (1) these shore duties can now go vacant and/or (2) shore duty assignments previously filled by rated officers can be sustained through the use of other career fields.[143]

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141 U.S. Army, *Unmanned Aircraft Systems Roadmap 2010–2035*, 54.

142 Ibid., (emphasis added).

143 In an era of budget and personnel constraints, a full analysis of shore duty requirements and available manpower is recommended to ensure that the addition of Group 5 UAS operations does not result in an increase in previously rated officer requirements—thereby possibly negating the Navy's "less costly" assumption (similar to what occurred with the Air Force, as demand increased dramatically).

A point of interest is that the Navy's rationale for using previously rated pilots was the same given by the Air Force when it initially established its RPA fleet in 1995.[144] Although it took 14 years, the Air Force now has a specific pipeline for training direct accessions to conduct Group 4/5 RPA operations at a cost that is 95% less than UPT and training time that is half as long as UPT.[145] This pipeline has reportedly produced qualified aircrew without an increase in safety incidents, as was initially feared.[146] A similar progression is seen in the other Services with the development of UAS specific training pipelines that now focus on direct accessions as the primary source of personnel. If the Navy continues to pursue this staffing methodology in its nascent UAS program, it is safe to assume it will face similar challenges as the AF and face unsupportable manpower requirements as proliferation of UAS within fleet operations becomes more prominent.

C. The Role of Technology

Through the review of current Service practices, the associated UAS roadmaps/ vectors, and developmental opportunities in and out of Defense channels, the research team observed that not only is the demand for UAS reaching an insatiable level, but that the associated technology is also maturing at an exponential rate.

Demand for and development of UAS technology is in a period of exponential growth within the defense and commercial industries.

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144 The Air Force conducted several studies in the infancy of its RPA program to determine if prior air-crew experience was required (and to some extent addressed the Air Force vs. Officer question). A 1998 Air Force Research Laboratory (AFRL) study concluded that prior aviation experience was required and that the skills learned in UPT were critical to flying RPA. In 2002, AFRL executed a more robust evaluation (addressing only MQ-1B operations) and concluded that "stick and rudder" skills were indeed required so that these pilots could be instructed to an appropriate level through various training venues. (The 2002 evaluation compared UPT grads, RPA pilots, Reserve Officers' Training Corps (ROTC) students and civil aviators.)

For more information on these 1998 and 2002 studies, see Ellen M. Hall and William C. Tirre, *USAF Air Vehicle Operator Training Requirements Study,* AFRL-HE-BR-SR-1998-0001 (Brooks AFB, TX: Air Force Research Laboratory, Human Effectiveness Directorate, January 1998), http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA340960; Brian T. Schreiber et al., *Impact of Prior Flight Experience on Learning Predator UAV Operator Skills,* AFRL-HE-AZ-TR-2002-0026 (Mesa, AZ: Air Force Research Laboratory, Human Effectiveness Directorate, Warfighter Training Research Division, February 2002), http://www.dtic.mil/dtic/tr/fulltext/u2/a401588.pdf. The 2002 study was supported by contracted parties from Lockheed Martin and Link Simulation and Training.

145 Cost is a comparison of undergraduate RPA Training and UPT for fighter pilots (T-6, T-38, and Introduction to Fighter Fundamentals). When compared to UPT, for those pilots going to transport or tanker aircraft (T-6 and T-1), URT is 90.6% less costly. Savings are even greater when Major Weapon System (MWS)-specific training is added (i.e., F-16, C-17, MQ-9, and so forth).

146 Multiple discussions with AF/A2CU and A3O Staffers.

While an in-depth review of technical advancements is beyond the scope of this paper, it is important to note the potential impact that technology development can have on UAS staffing methodologies.

Each of the Services is pursuing its own initiatives to capitalize on the rapid development of UAS technology, to include everything from enhanced sensors to increased autonomy associated with aircraft control. The Air Force's RPA Vector report[147] emphasizes the potential that is available within the SUAS fleet and outlines several innovations underway to evolve these systems so that they can be applied in a much broader scope at the operational and, possibly, strategic levels of engagement. However, the Air Force does not address which category of performer it would use to control such operations. Questions arise (e.g., Will these platforms be capable of executing the missions and roles currently conducted by the Group 4 MQ-1/9? If so, is an Air Force officer pilot still required because of the mission or does the simplicity of the aircraft enable enlisted aviators?).

Although the Group 2/3 UAS currently in service are strictly controlled via LOS operations, technology is currently available to enable BLOS operations. As this technology matures and is fielded (in the short term), there is the possibility to operate these UAS under an RSO construct similar to the larger Air Force and Navy programs. The same could be done with the Army's MQ-1C, thereby eliminating a substantial rotational force requirement. In addition to BLOS technology, the Army, Navy, and Marines have significant interest in unmanned technology within domains other than just the air (i.e., ground and sea). This prevalence of unmanned technology across the domains drives an increased desire—and eventual combat requirement—to simplify and integrate these systems. The Navy has already demonstrated such integration and simplification by using rotary wing UAS designed to deliver supplies to deployed forces with little more than 5 minutes of operator training and a mobile tablet device.[148] In terms of maturing UAS technology, the topic of the day has been the concept of "swarming" UAS (increased autonomous control enabling hundreds of smaller platforms to conduct missions now reserved for the current HD/LD aircraft). As this concept comes to fruition, definite opportunities exist for reducing manpower costs while increasing capacity provided by an increased density of assets. Overall, the observation related to this topic is rather simple:

Maturation of technology will have an impact on the force presentation and staffing methodologies used within DoD's UAS enterprise.

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147 United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038.*

148 The Navy flew the first remotely piloted aircraft, an N-9 named *The Wild Goose*, on September 15, 1924. See Callahan, "Reinventing the Drone, Reinventing the Navy (1919–1939)," 105.

D. Summary

Table 16 lists seven observations of UAS staffing methodologies to bear in mind when considering the Service programs.

Table 16. UAS Staffing Observations

1	Service culture shapes how the roles and responsibilities are viewed for individual category of performers.
2	DoD-assigned missions/responsibilities and the anticipated operating environment shape how the Services view the role of their UAS.
3	The C2 concept of UAS operations (centralized vs. decentralized) and resultant authority required by aircrew relate directly to officer vs enlisted decision.
4	The Army stated the need for commissioned officer UAS career track or an additional skill identifier.
5	The Navy is the only Service that does not allow direct accessions to perform Group 4/5 pilot duties.
6	Demand for and development of UAS technology is in a period of exponential growth within the defense and commercial industries.
7	Maturation of technology will have an impact on the force presentation and staffing methodologies used within DoD's UAS enterprise.

Overall, the analysis of the individual Service staffing models demonstrates significant differences between each. However, in many cases, these differences are justifiable when viewed against the mission requirements of a particular Service's UAS force. While the choice to staff using different categories of performers is justifiable in some cases, it does not mean that current practices are always best. As technology matures, these methodologies should be reassessed as this inevitable increase in both capability and capacity will likely prove current staffing principles unsupportable given the likely continuation of a fiscally constrained operating environment. Analysis of this community highlights not only the ability to gain substantial manpower efficiencies, but also the opportunity for increased cooperation across the Services to capitalize on lessons learned within the enterprise. The next chapter will analyze aspects of UAS missions to identify potential alternative staffing methodologies.

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7. Mission Element Analysis

In comparison to contemporary aircraft systems, UAS offer a unique opportunity in terms of manpower management. The CONOPS combined with the sortie duration (time between takeoff and landing) enable—and in some cases necessitates—multiple individuals to be at the control during the sortie. While this requirement is especially true for the larger Group 4/5 UAS, the rapid development of technology is increasing the capability and flight time associated with the smaller systems, where multiple-crew CONOPs will quickly become the norm.[149] With this in mind, before analyzing staff methodology alternatives, this chapter dissects the basic elements of a UAS sortie to analyze which category of performer is capable of conducting each element. Such analysis raises opportunities for potential force mix efficiencies. For example, as discussed earlier, military incumbency is required for the employment of weapons; however, for Group 4 UAS, the act of employing weapons from a UAS may only take 1 hour (to include the operational prep, communications, and so forth) of a 22-hour sortie. Is there an opportunity to use a different category of performer for the remaining 95% of the sortie?

The review of current Service practices highlights that despite differences in force presentation and operating concepts, the basic mission elements associated with a UAS mission are rather static. The basic mission elements used for this analysis are as follows:

- Launch and recovery operations,
- Transit operations,
- ISR collection,
- Support to deployed forces (combat and non-combat), and
- Weapons employment.

Analysis using these basic mission elements will use the category of performer decision tree described in Chapter 3 and will remain Service and platform agnostic. The elements selected are generic enough that they apply (or can apply) to all UAS operations. For example, a Marine Corps UAS conducting a force reconnaissance mission would include launch and recovery operations, transit operations, and ISR collection and may include support to deployed forces (combat). If Air Force operations within Libya are analyzed (no ground troops), elements would include launch and recovery operations,

[149] Some CONOPS will still include a single crew/operator per mission. This situation is not limited by aircraft size (i.e., only Group 1) but rather by how the system is employed. As Group 1 UAS capability improves to include the potential of swarming, it is quite possible that separate operators would control the launch and transit while another crew(s) is conducting the operation itself.

transit operations, ISR collection, and weapons employment (under a SCAR mission).[150] In contrast, Army National Guard UAS supporting humanitarian response to a regional flood would include launch and recovery operations, transit operations, and support to deployed forces (non-combat). The key is that each of these elements helps to break down UAS operations into their simplest form and allows us to analyze the manpower requirements regardless of current or future system capabilities.

A. Launch and Recovery Operations

Launch and recovery operations include the physical act of taking off and landing the aircraft, along with operations within and around the terminal location (often an airfield or an afloat forward staging base). These functions are analogous to operations within civil aviation and do not represent an IG task. As Figure 10 depicts, the launch and recovery operation decisions move to the right side of the figure, where the answers are completely dependent on risks that the operational commander is willing/able to accept based upon the operating location. For example, if a UAS team is traveling with a forward-deployed Marine infantry element, operating conditions could include risk that is considered unacceptable for civilians (DoD and/or contracted). On the other hand, if an operating location is rather secure and a civilian organization is able to meet operational demands associated with that location, a contracted force can conduct UAS launch and recovery operations. However, if operational requirements cannot be met, the launch and recovery operation decisions move to the left side of the figure. Through this line of reasoning, the figure shows that military incumbency is not required for basic launch and recovery operations. The question then becomes whether the risk of the operating location is acceptable for a civilian. In either case, a cost-based analysis is required to compare the cost of a contracted operation with that of a civilian and/or military force.[151] Several illustrative examples will show how to analyze operational requirements and determine the appropriate category of performer.

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150 United States Air Force, *RPA Vector: Vision and Enabling Concepts 2013–2038.* SCAR missions were routinely flown by Air Force UAS crews.

151 Civilian positions are inherently less costly than their military counterparts, so, in terms of a pure cost analysis, a contractor vs. civilian counterpart is most telling. In the case where no government civilians are available (as is currently the case), this point would be moot. However, for this analysis, the assumption is that government civilian UAS operators are a viable solution.

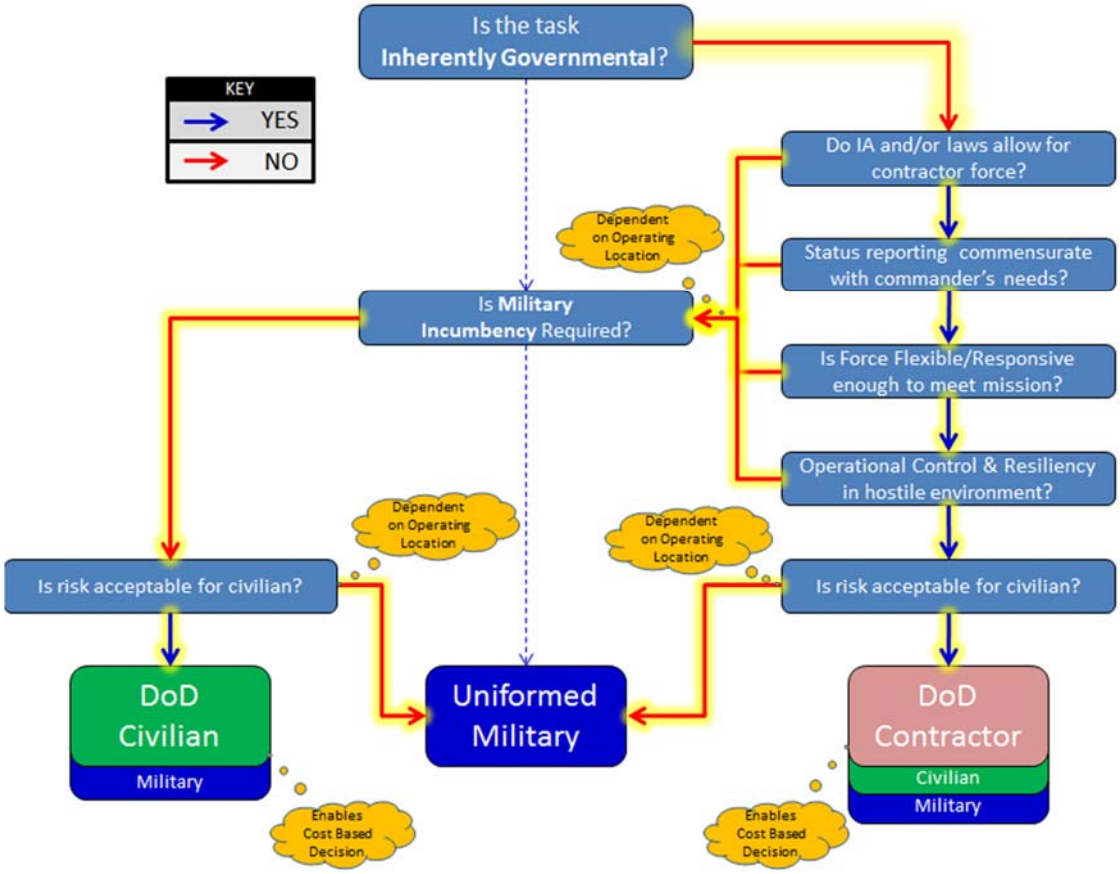

Figure 10. Category of Performer Decision Tree (Launch and Recovery Operations)

The first example is a Group 4 LRE located in southern Europe (providing support to the Mediterranean region). In this case, the location is very secure and has a well-established logistical supply chain. Assuming that a contracted force can meet the desired requirements, the cost for such a contract must be compared with the government civilian and/or military options. In contrast, an operating location out of a Northern Africa nation may not be as secure, and, therefore, risk to force/mission now plays a larger role. In some cases, launch and recovery operations must be prepared to move locations upon short notice to respond to emerging requirements and/or threats. In cases where operational requirements create additional cost requirements, the cost benefit will likely quickly favor the government civilian/military option.

In addition to these examples, new operating concepts/environments and associated technology development have quickly enabled operations from naval vessels. This case is another instance in which the operational risk associated with operating from a combat platform at sea must be included in the overall decision.

The one caveat to these examples would be if operations included base or ship defense for which the crews were required to employ weapons; however, this aspect is addressed

in the subsequent weapon employment mission element. While these examples illustrate the multiple variables associated with this decision, when analyzing manpower costs, launch and recovery operations lend themselves to a civilian work-force.

B. Transit Operations

Transit operations (see Figure 11) are the part of the mission during which the aircraft travels to/from its terminal location to its operating location. Transit operations can also include travel between various operating locations. Similar to launch and recovery operations, transit operations are not IG nor do they require military incumbency. Therefore, the category of performer decision is primarily based upon an operational risk and cost assessment. Like launch and recovery operations, transit operations open the possibilities of a civilian workforce (i.e., DoD civilian or contracted force).

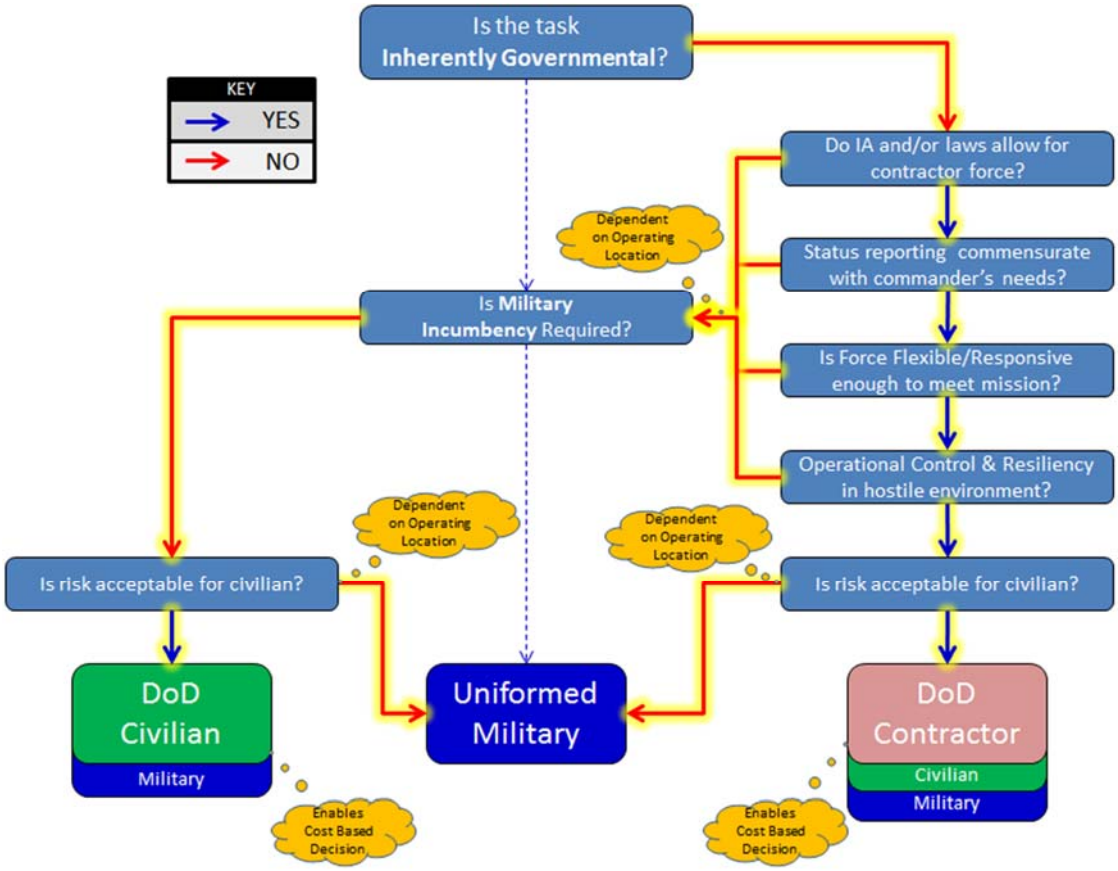

Figure 11. Category of Performer Decision Tree (Transit Operations)

C. ISR Collection

ISR collection includes operating the aircraft during the more "traditional" UAS role of collecting various data that include full-motion video, signals intelligence, synthetic

aperture radar, and so forth. While there can be significant debate on the IG nature of this activity, ample evidence is available of the willingness of the U.S. Government to contract the services required for this mission set. Therefore, it is inferred that the act of collecting these data is not IG.[152] Therefore, much like the two previous mission elements, Figure 12 depicts the decision tree enabling a risk/cost analysis that identifies this operation as being open to a civilian workforce.

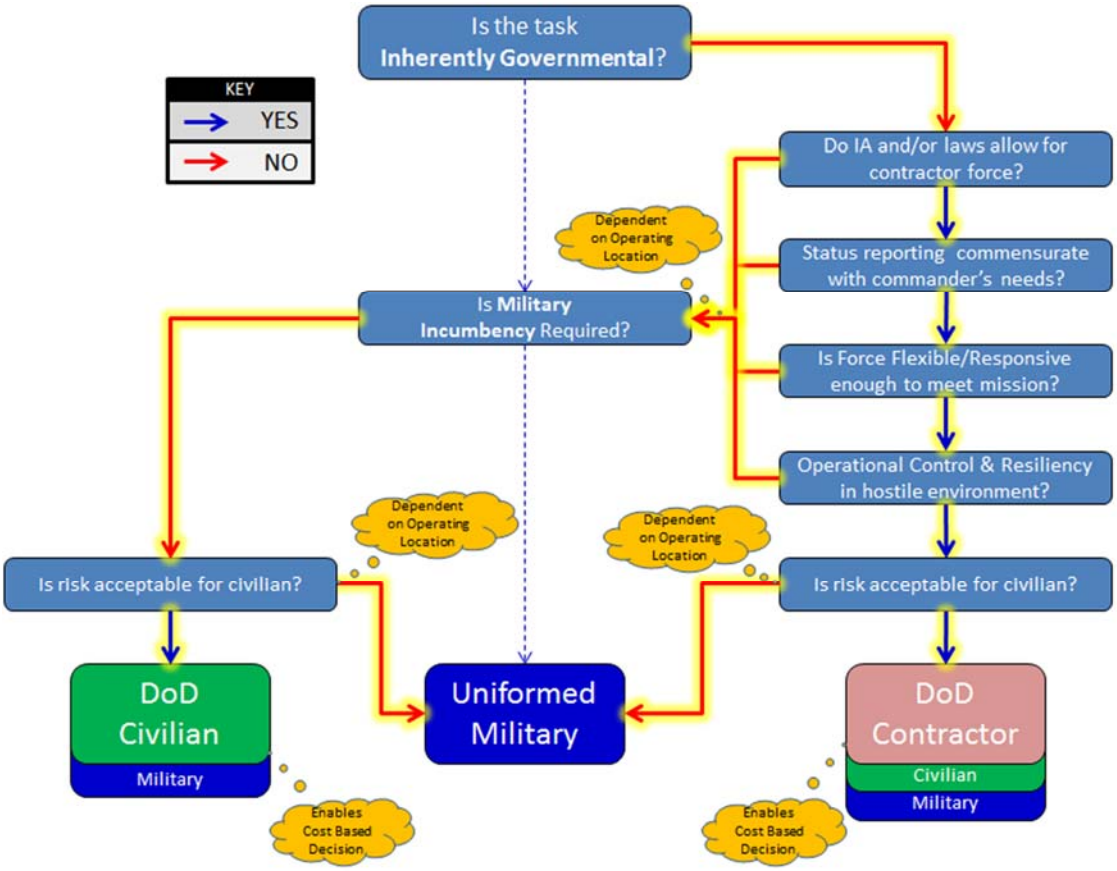

Figure 12. Category of Performer Decision Tree (ISR Collection)

D. Support to Deployed Forces (Combat and Non-combat)

The mission element of support to deployed forces was divided into two separate subcategories: combat and non-combat. In this mission element, the term "deployed" refers to forces that are "outside the wire" or rather beyond the confines of a secured operating location. Those operations within the combat subsection include operations such as direct action (i.e., raids) and convoy escort and operations in support of a naval force since such

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152 Analyzing and exploiting the data to produce intelligence products is also debated but is not within the scope of this research.

an element must always be prepared to defend the fleet. As depicted in Figure 13 and discussed previously, this type of support should be considered IG. As such, the subsequent decision is based upon operating location and associated risk. Secure and safe locations, such as U.S. operating locations for Air Force RSO, enable a cost-based analysis that shows DoD civilians as a potential cost-saving alternative. On the other hand, if forces are deployed forward in a combat zone, that calculus may require military incumbency based on the threat to force, maneuver requirements, and/or the defensive posture associated with that mission.

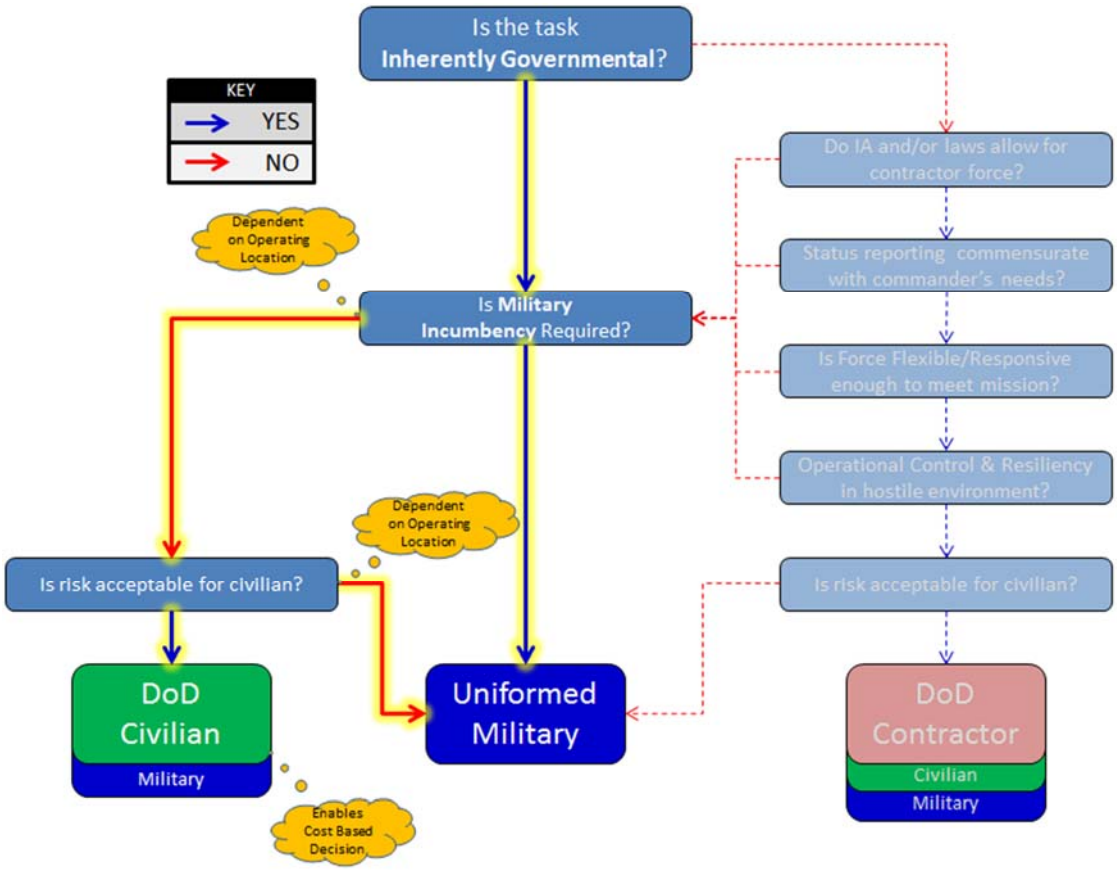

Figure 13. Category of Performer Decision Tree (Support to Deployed Forces (Combat))

In contrast, "non-combat" support operations include overwatch of a force providing humanitarian assistance to an affected region or non-combat personnel recovery operations. Such operations are not IG and therefore, as depicted in Figure 14, the decision is similar to those where DoD civilians and contractors are appropriate in this role. In these situations, risk associated with operating locations will not necessarily come from enemy combatants, but rather from environmental dangers (e.g., a natural disaster) or local criminal elements.

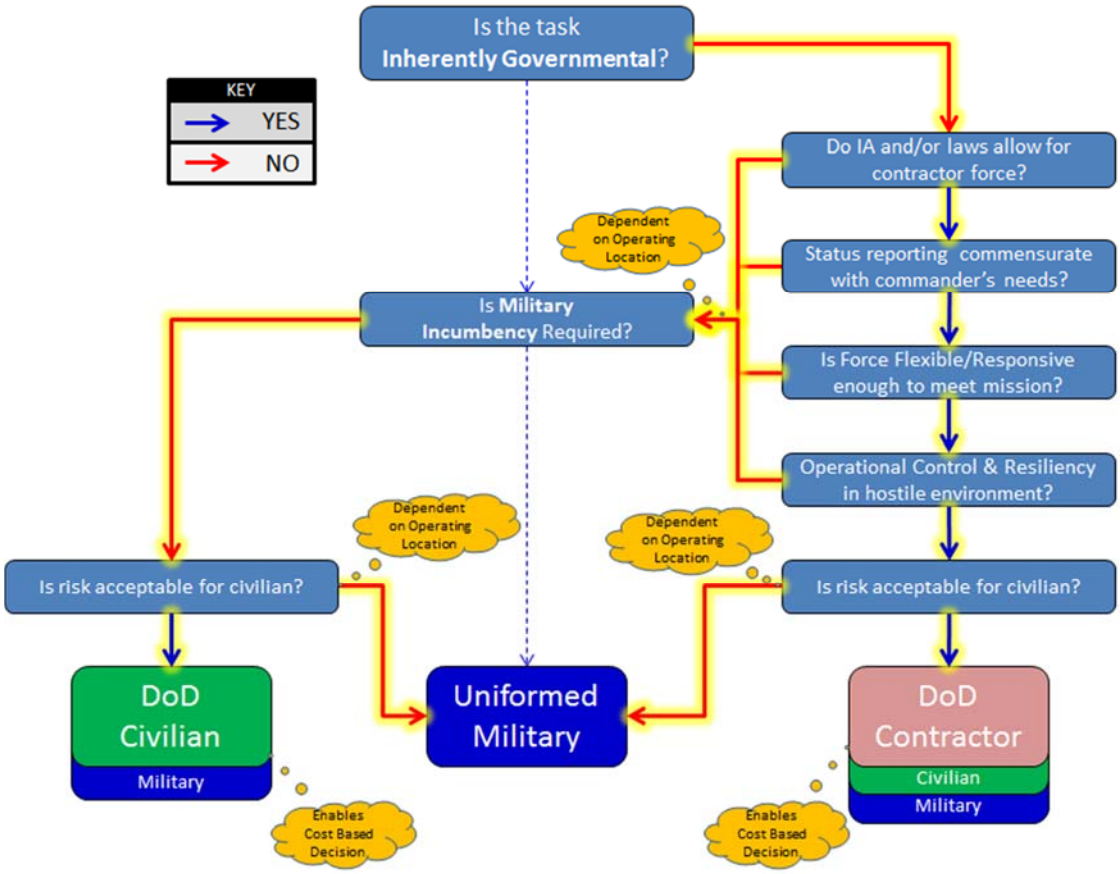

Figure 14. Category of Performer Decision Tree (Support to Deployed Forces (Non-Combat))

E. Weapons Employment

Using the definition provided in Chapter 3, which includes "the employment of, and/or provides terminal guidance to, kinetic weapons," military incumbency is clearly required.[153] As stated in DoDI 1100.22,

[153] As outlined in Appendix A, "kinetic weapons" refer to those weapons that depart an aircraft or are employed from another source (i.e., bombs, missiles, artillery, and so forth). Effects from other sources, such as electronic spectrum or cyber means, are not considered in this analysis.

> … manpower shall be designated military … if the *planned use of destructive combat capabilities is part of the mission* assigned to this manpower … includes manpower located both *inside and outside a theater of operations* if the personnel operate a weapon system against an enemy or hostile force (e.g., … *unmanned aerial vehicle operators*).[154]

The decision, therefore, is then left to officer vs. enlisted (see Figure 15). Subsequent chapters will address factors associated with authority to the release a precision guided munition but the employer of that munition may indeed be either officer or enlisted.

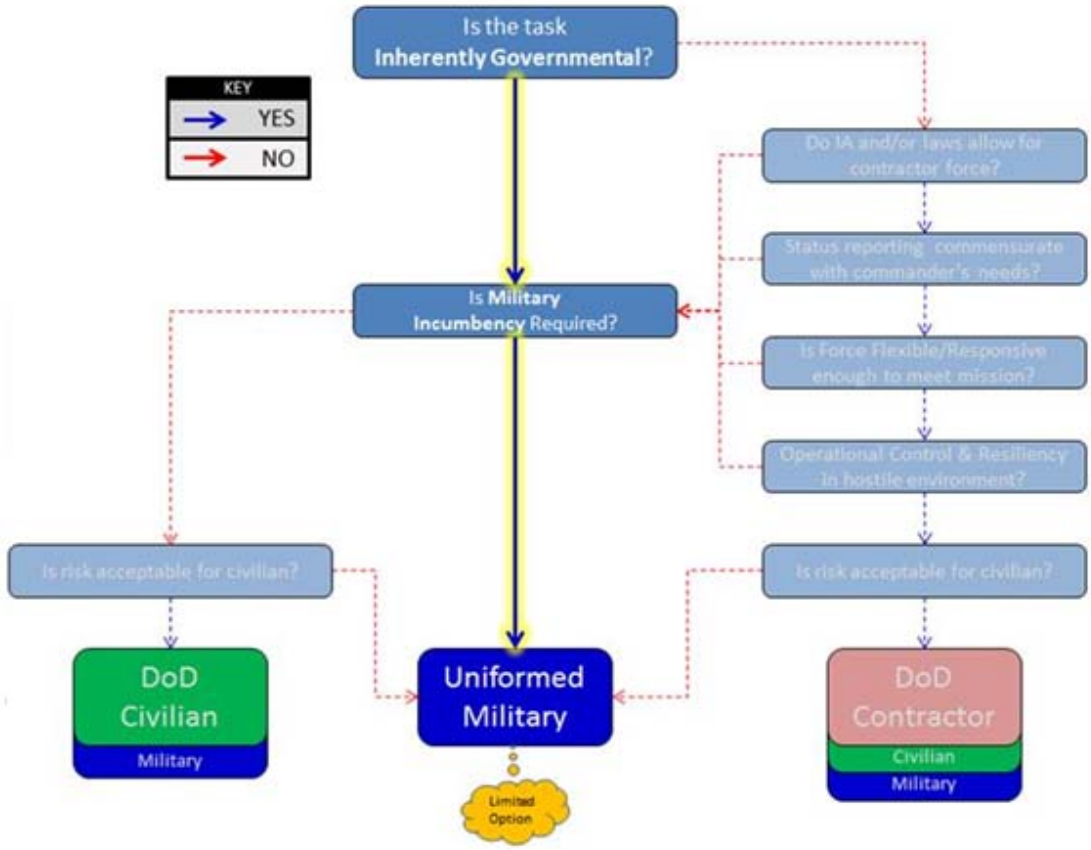

Figure 15. Category of Performer Decision Tree (Weapons Employment)

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154 Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 19 (emphasis added).

F. Summary

In reviewing each of the mission elements associated with UAS operations, an apparent opportunity is highlighted. Although DoD civilians are not currently used in UAS operations, analysis shows definite opportunities within the enterprise for government civilians. As depicted in Figure 16, the only mission element that is not allowed for the civilian workforce is the employment of weapons. Already a small subset of the DoD UAS enterprise, executed primarily by the USAF and small portion of the Army's fleet, as proliferation of UAS across DoD missions continues, weapons employment will involve only a small fraction of the total force. In this regard, an organization responsible for weapons employment has an opportunity to balance its force to meet mission requirements while also taking advantage of the cost savings associated with civilian billets. Analysis also showed that a contractor-based force can conduct most of the mission elements. With this information, analysis will now focus upon identifying alternative staffing models across the UAS enterprise.

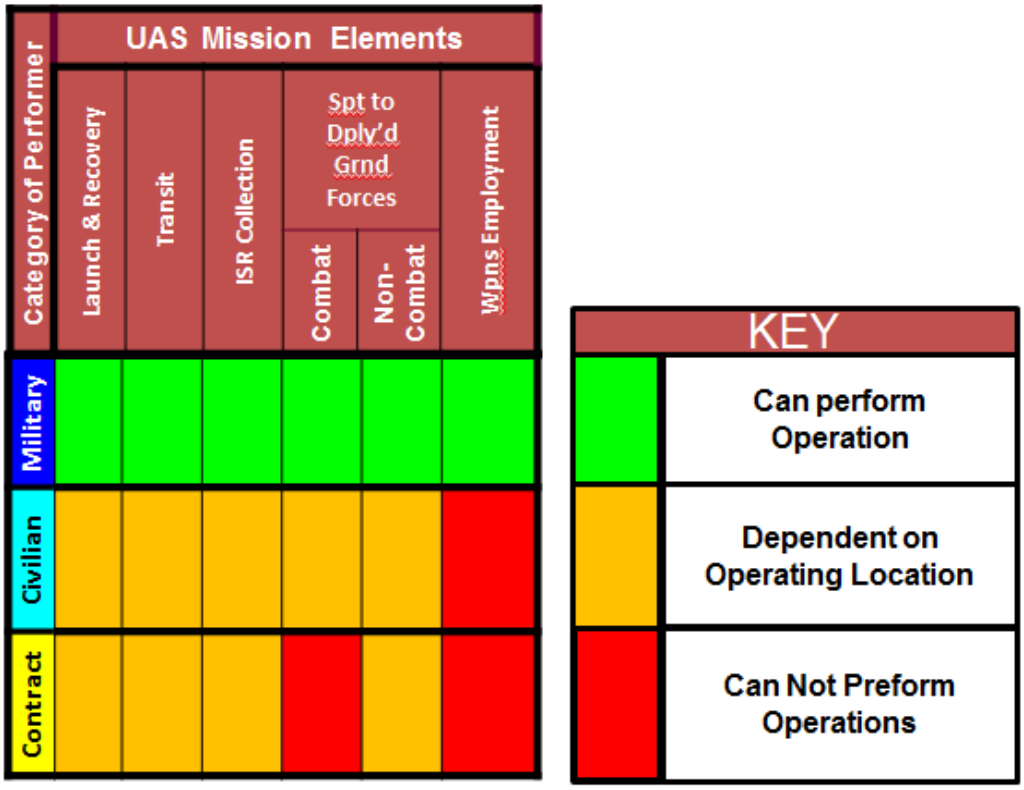

Figure 16. Summary of Mission Element Analysis

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8. Staffing Alternatives

Analysis aimed at identifying alternative cost-saving staffing strategies for the DoD's UAS enterprise identified multiple variables that affect each of the Services' force mix decision-making process. The following force mix alternatives take into account the individual Service roles and missions. Since operational requirements vary widely, some generalities associated with each Service were made. For example, the Marine Corps expeditionary nature requires a capability to operate within hostile and austere environments. This assumption alone drives a necessity for the use of military personnel; however, the following analysis highlights factors that may change that calculus. The following alternatives are organized along category of performer delineations, and, while the alternatives are segregated as such, aggregate variations may indeed be possible.

A. Use of Civilians

Manpower shall be designated as civilian except when military incumbency is required ….[155]

The previous mission element analysis showed that DoD civilians can conduct all aspects of a UAS operation, except when weapons employment is required. Although this exception currently affects only the larger Group 4/5 UAS, the Services must consider when they are planning future capabilities development. Understanding that government civilian billets come with an inherent cost savings over military positions, two alternatives are recommended for further analysis to balance cost-savings with mission requirements: civilian applications to either (1) the LRE and (2) the mission command element (MCE) (i.e., transit and basic ISR collection).

While the following alternatives capitalize on cost savings associated with civilian manpower, several variables beyond the scope of this analysis are associated with the ability to hire civilians into such positions. These factors include operations tempo, shift work, potentially undesirable operating locations, and the strength of the civilian UAS market.[156] In addition, supporting research is required to understand both the availability

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155 Department of Defense, "Guidance for Manpower Management," DoDD 1100.4, 3.

156 See Bureau of Labor Statistics Website, "Occupational Employment Statistics," accessed January 26, 2015, http://www.bls.gov/oes/home.htm. The Bureau of Labor Statistics' Occupational Employment Statistics (OES) program produces such analysis for over 800 various occupations. As of the writing of this paper, the OES had not yet conducted such analyses on the UAS/RPA market. While extensive

and accessibility of a civilian UAS workforce to feed, and sustain, DoD requirements. If such a pool of individuals do not exist, or won't for several years, this may not be a viable option for the short term. However, if such a workforce is available, their experience and potential longevity in service, without the need to meet military developmental requirements, may provide additional long-term savings. For this paper, to illustrate potential cost savings within the enterprise, the following alternatives assume that these variables are *not* factors.

1. Launch and Recovery

The decision to use government civilians to launch and recover UAS is primarily reliant upon the risk associated with the operating location. The Marines are expected to provide an expeditionary presence that is able to deploy forward and maneuver within hostile and austere environments while employing offensive tactics in defense of their positions (i.e., "pick up a gun and fight"). Therefore, civilian operators do not fit most of the Marine UAS operations.[157] On the other hand, through the use of contractors (e.g., GOCO/COCO UAS), DoD has already demonstrated a willingness to deploy civilians to secure forward operating locations and/or on Navy combat vessels in a variety of positions.

As mentioned, the Marines and the Army are currently focused on smaller UAS systems that are organic to maneuver-type units. These types of operations tend to call for military incumbency; however, as operations become more secure and/or larger systems are used, additional opportunities for civilians will be available. Currently, this situation is the case for the Army, Air Force, and Navy Group 4/5 UAS. As the larger aircraft are typically launched and recovered from secure locations, the associated risk is typically acceptable for government civilians.[158] Since the Air Force has the largest number of Group 4/5 UAS, the following alternative uses Air Force's program numbers even though the concept also applies to Army and Navy programs.[159]

The Air Force MQ-1/9 program of record currently includes 15 LREs.[160] To support this requirement, the Air Force assigns each of its RPA units a portion of LRE billets. As

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market research (e.g., salaries, job requirements, work force demand, and so forth) could address this challenge, it is well outside the scope of this paper.

[157] The same can be argued for certain Army infantry units that also operate in this manner.

[158] This approach is evident in current operations by the number of civilians on forward operating bases where UAS/RPA operate. In future non-permissive environments, this situation may not be the case; however, these particular UAS are not prone to launch and recover within a non-permissive environment.

[159] Due to several variables which are beyond the scope of this study, generalities are used to illustrate a basic analysis.

[160] Telephone interview with Maj Michael Lewis, HAF/A3, October 17, 2014.

shown in Table 17, each LRE consists of 5 pilot and 5 sensor operator billets, for a total of 10 personnel.

Table 17. USAF LRE Manning Requirements (General)

Unit Type Code (UTC) Line Number	Core AFSC	AFSC Title	Grade	Quantity
1	11U3	RPA Pilot	Maj	1
2	11U3	RPA Pilot	Capt	4
3	1U07	RPA Sensor Operator Craftsman		1
4	1U05	RPA Sensor Operator Journeyman		4

Source: Telephone interview with Maj Michael Lewis, HAF/A3, October 17, 2014

Note: Air Force LRE requirements are similar across units. Costing for sensor operators was done using 1N1 AFSC for sensor operators. In addition one E-7, one E-5 and two E-3s were used as a conservative estimation. See Appendix B for the full FCoM data. The numbers used in this table are currently under review by the Air Force since they do not represent enough individuals to meet rotational deployment requirements. The Air Force is looking at increasing the number of billets associated with its LREs to better meet demand. (Note source: Interview with RPA Manpower and Career Development Tiger Team, November 20, 2014).

If one takes all these positions and transitions them to purely civilian equivalent positions, the annual savings equate to $777,696 per LRE. In the case in which all 15 USAF MQ-1/9 LREs were converted to pure civilian operators, an approximate $11.7 million annual savings is realized.[161] However, operationally, it is understood that an all-civilian LRE force would not meet Air Force requirements. For certain LREs, the risk, base defense requirement, and/or host nation agreement will require military personnel. While others LREs are secure enough to allow an all-civilian force, there will be options in between. With this in mind, Table 18. depicts a force mix alternative across the 15 Air Force LREs that could meet an LRE civilian/military force mix.[162] As seen with four all-military LREs, five 60-40, three 20-80, and three all-civilian, the total cost savings is approximately $5.1 million annually ($25.65 million across the Future Years Defense Program (FYDP)).[163]. This savings comes from transitioning approximately half (74 of 150) of the LRE positions from military to civilian.

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[161] Annual savings based upon FCoM numbers (see Appendix B). The $776,696 and $11.7 million totals are for full savings to the Federal Government. Savings specific to DoD are $610,776 and $9.16 million, respectively.

[162] A full mission analysis of Air Force LRE requirements was not conducted; however, this framework is general enough to meet a majority of Air Force LRE requirements based upon Group 4/5 LRE operations that typically occur in secure locations.

[163] Ten Operational Squadrons does not include the MQ-1/9 Training squadron at Holloman AFB or the launch and recovery (LR) squadron at Cannon and Creech AFBs. Savings totals are for full savings to the Federal Government. Savings specific to DoD are $3.9 million annually and $19.48 million over the FYDP.

Table 18. Annual Costing of Air Force LRE Civilian/Military Force Mix

UTCs	Annual Cost/LRE		# of UTCs	Sub-total		Billets	
	DoD	Fed Gov		DoD	Fed Gov	Mil	Civ
RPA LRE UTC (All Mil)	1,283,861	1,592,561	4	5,135,444	6,370,243	40	0
LRE UTC (2 Civ + 3 Mil)	1,158,832	1,400,764	5	5,794,160	7,003,820	30	20
LRE UTC (4 Civ + 1 Mil)	804,398	979,562	3	2,413,194	2,938,686	6	24
RPA LRE UTC (All Civ)	673,085	814,865	3	2,019,255	2,444,594	0	30
[redacted]							
Total for 15 All-Military RPA LRE UTCs				19,257,915	23,888,415	[redacted]	
Total for 15 Force mix RPA UTCs (as presented above)				15,362,053	18,757,343	[redacted]	
Delta (i.e., savings)				3,895,862	5,131,072	[redacted]	

Note: Delta is between mix depicted and all 15 military LREs.

2. Transit Operations

Another mission element in which a civilian force may be useful comes in transit operations. Once again, this section will use Air Force MQ-1/9s since they represent most of the larger UAS force. For this short example, we will use the following basic assumptions: (1) Air Force RPA squadron responsible for 5 CAPs, (2) average flight lasts approximately 22 hours, and (3) the average transit time to/from an objective area takes 2 hours.[164] Using this information, we can calculate the average percentage of scheduled flying time dedicated to transit operations:

$$\text{\% Sq Flying Time for Transit} = \frac{(\text{Average Transit Time to Obj} * 2)}{\text{Average Flight Time}}$$

$$\text{\% Sq Flying Time for Transit} = \frac{(2 \text{ hrs} * 2)}{22 \text{ hrs}}$$

$$18\% = \frac{4}{22}$$

Based upon our assumptions, this 18% of flying time associated with transit operations can, in theory, be directly applied to a percentage of aircrew required for support. With the program of record for Air Force RPA operations that require 40 pilots to support 4 CAPs, 18% of the crew force equates to 7 pilots. Using math similar to our previous

[164] The 22-hour assumption is standard for MQ-1 operations and has been demonstrated by the recently fielded MQ-9 Extended Range. The basic MQ-9 is airborne closer to 17 hours. Transit time can vary wildly (up to > 8 hours in some operating locations); however, for our analysis, Afghanistan-type transits were assumed, which would place an objective approximately 200–400 miles away (depending on aircraft and wind velocity).

calculations for the LRE civilian conversions, transitioning 7 pilot positions to DoD civilians would save approximately $560,000 annually:

$$\text{Annual Cost Savings} = (\text{Cost saving per billet}) * (\text{\# of billets converted})$$

$$\text{Annual Cost Savings} = (\text{O-3 to GS-11}) * 7$$

$$\$559{,}573 = (\$79{,}939) * 7$$

When sensor operators are included in this conversion, the potential annual cost savings increase to around $1 million:

$$\text{Annual Cost Savings} = [\ (\text{O-3 to GS-11}) * 7\ ] + [\ (\text{E-5 to GS-5}) * 7\ ]$$

$$\$1{,}010{,}856 = [\ (\$79{,}939) * 7] + [\ (64{,}469) * 7\ ]$$

Since UAS operations currently run 24/7/365 with transit operations occurring at any time of the day, a force of only 7 crews to perform all transit operations is extremely difficult to schedule operationally.[165] Therefore, we focused on transitioning a full CAP to use civilian billets (10 pilots/10 sensors). This approach allows flexibility in scheduling, as well as an understanding that the same individuals can perform basic mission support up to but not including weapons employment. As Table 19. depicts, approximately $1.37 million annually is saved by converting 1 CAP (20 billets) worth of manpower to DoD civilians.[166] If each of the 10 operational Air Force MQ-1/9 squadrons did this conversion, total program annual savings could total $13.65 million ($68.3 million across the FYDP).[167] Training and test squadrons could further capitalize on civilian manpower since they are not responsible for combat support missions.

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165 Considerations include standard 2-day weekends, sick days, training, time to adapt for shift changes, and so forth. Included is the potential of a limited duty hour during a standard week for civilians (i.e., 40 hours). Although the Air Force is looking at the potential of using pilots only for transit operations, the current construct of also assigning a sensor operator (for help running checklists during emergencies) was used. Removal/decrease in number of sensor operators used would increase savings.

166 Since no model based upon mission analysis is available for the appropriate civil/military mix, best assumptions were made with the available data. Distribution of ranks and grades throughout the squadron was kept as close in line as possible with current Air Force RPA squadron structures.

167 Ten Operational Squadrons does not include the MQ-1/9 Training squadron at Holloman AFB or the LR squadron at Cannon and Creech AFBs. Savings represent savings to the Federal Government. DoD savings are $10.31 million annually or $51.58 million across the FYDP.

Table 19. Cost Comparison of USAF MQ-1/9 Squadron Using Civilians

USAF RPA Squadron	Annual Cost		Billets	
	DoD	Fed Gov	Mil	Civ
Current	14,223,874	17,557,834	108	0
1 Civilian CAP	13,192,353	16,192,473	88	20
[redacted]				
Delta (i.e., savings)	1,031,521	1,365,361	[redacted]	

Note: Costing considers only the UAS aircrew. Support personnel (e.g., aviation resource management and secretary) are not included.

While these numbers are specific to the Air Force MQ-1/9 program, the Army Gray Eagle companies could also realize savings. If the concept of government civilian operators is established within MQ-1/9, the RQ/MQ-4 missions, which do not include weapons engagement, should be able to accept a greater percentage of DoD civilians, providing another multi-million dollar annual savings across Air Force and Navy programs.

B. Officer vs. Enlisted

As shown in the staffing analysis, while the Services base their staffing methodologies upon their assigned mission roles and responsibilities, there may be some opportunities to transition a portion of the Navy and Air Force Group 4/5 UAS manpower from officer to enlisted. While the Army has had demonstrated success within its MQ-1C program, this decision to use enlisted operators in the Air Force and Navy requires further mission analysis to assess which portion of their respective missions can be met by enlisted pilots. For illustrative purposes, Table 20. depicts the potential cost savings associated with this transfer. The transition of 60% to enlisted pilots can provide up to $1.8 million per squadron ($18.2 million annually, $91 million in FYDP, if accomplished in all 10 operational MQ-1/9 squadrons).

Table 20. Cost Comparison of Air Force RPA Squadrons Using Enlisted

USAF RPA Squadron	Annual Cost		Delta (i.e., savings)	Pilot Billets	
	DoD	Fed Gov		Officer	Enlisted
All Officer	14,223,874	17,557,834		50	0
20% Enlisted	13,610,200	16,944,160	613,674	40	10
30% Enlisted	13,312910	16,646,870	910,964	35	15
40% Enlisted	13,000,585	16,334,545	1,223,289	30	20
50% Enlisted	12,714,217	16,048,231	1,509,603	35	25
60% Enlisted	12,401,946	15,735,906	1,821,928	20	30

Note: See Appendix B for the breakdown of positions converted. Commander (1), Operation Officer (1), and Squadron Operation Center Billets (5) are not included in enlisted conversion. In addition, the Delta is the same for the Federal Government and DoD.

1. The Marine Model Applied to Air Force and Navy Programs

The Marine Corps model could possibly be applied to the Navy and/or Air Force Group 4/5 UAS squadrons.[168] While initially sound in concept, the Marine Corps model is able to mitigate risk through its operating concept—mitigation that is enabled through technology and the oversight of operations (and associated aircraft control) available to the mission commander. In discussion with various SMEs, the complexities of the MQ-1B and MQ-9 systems associated with the lack of ground control system/operation center oversight available make it unlikely that the Marine Corps model would meet the desired responsiveness required for strategic missions that the Air Force/Navy contend require the more decentralized execution model. Although beyond the scope of this paper, it is recommended that future infrastructure upgrades and/or acquisitions be capable of supporting a manpower model similar to that of the Marine Corps.

2. Warrant Officers (WOs)

The use of WOs is typically addressed in terms of the Air Force program. As stated earlier, lacking such a program, the Air Force would have to develop an entirely new element within its force structure to support this option. To understand the full potential associated with possible manpower savings, a full business case analysis will need to include the cost of establishing a WO program and whether this program would apply to only RPA or include other AFSCs. The Navy, for its part, assessed and terminated its short-lived flight WO program since it conflicted with other force management policies.[169] Rather than disregard this option outright, this study reviewed some basic assumptions on costs associated with manpower savings as if the Air Force had a WO program established.

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[168] UAS-qualified officer mission commander with enlisted UAS pilots controlling aircraft.

[169] Mark D. Faram, "Flying Warrant Program Gets the Ax."

Table 21 shows approximately $1.3 million potential annual savings associated with converting an Air Force MQ-1/9 squadron to a WO-centric pilot force.[170] In total, the USAF has 1,418 authorized officer billets within RPA, and converting all those to a WO equivalent would save a conservative $110 million annually in manpower costs. Further research comparing the pros and cons and costs associated with establishing a WO force structure is recommended.

Table 21. Cost Comparison of USAF RPA Squadrons Using Warrant Officers

USAF RPA Squadron	Annual Cost		Delta (i.e., savings)
	DoD	Fed Gov	
Current	$14,223,874	$17,557,834	
WO Pilots	$12,917,076	$16,251,036	$1,306,798

Note: Delta is the same for the Federal Government and DoD.

3. Limited Duty Officers (LDOs)

LDOs hold the same rank and benefits as their line officer counterparts. Therefore, while there are no inherent annual cost savings, such a program could be beneficial when considering total life-cycle costs. Since LDOs are focused primarily on their technical competence, they presumably do not require the same "broadening" opportunities as their line counterparts. Previous IDA studies have calculated an average Air Force officer's career at approximately 15 years. Presuming approximately 25% (3.7 years) of an officer's career is spent in a developmental assignment, LDOs present possible savings when considering training costs. However further analysis of the UAS community and such an LDO program is required to assess anticipated retention rates within this fledgling career field. As with the WO program, Services without a preexisting LDO program must analyze the overall cost of establishing this new force structure element and its applicability beyond the UAS community. In addition, restructuring the current policy of selecting LDOs for solely the enlisted ranks and opening such opportunities to the officer corps, may prove to provide additional life-cycle cost benefits.[171]

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[170] Commander and Operations officer were left as Officer (O-5) billets. Transitioning the Major and Captain billets into one W-4, 28 W-3s, and 26 W-2s provided the reported savings. Since the Air Force does not have WOs available in FCoM, Army costing data were substituted.

[171] While further analysis is required, a career path to include "on and off-ramp" opportunities for the current "traditional" officer corps into the LDO might address several force management issues currently under assessment within the DoD.

C. Total Force Options

Although in-depth research into total force options was beyond the scope of this study, the research team noted a lack of integration. Not only does the Air Force have most of the larger UAS, it is also building a significant Strategic Reserve force using Air Force Reserves and Air National Guard units. However, a majority of these units support only one CAP full time, with a strategic reserve of one to two additional CAPs. Through basic operational scheduling considerations, a single CAP squadron is highly inefficient. Compounding this inefficiency is the fact that of the majority of these Reserve and Guard squadrons are not collocated with their active duty counterparts. Potential efficiencies and cost savings (material and manpower) exist in increasing integration between active duty and strategic reserve forces.

D. Joint Force Options

The apparent duplication of aircraft systems across the Services was raised on multiple occasions. It was understood that the smaller Group 1–3 platforms performed primarily organic support over relatively short time periods, which made the use of a common joint platform across multiple Services understandable. However, while CONOPS differ between the Services, use of almost identical Group 4/5 platforms seems to present several inefficiencies in terms of acquisition, operating, and sustainment costs. Although beyond the scope of this study, further research is recommended. This research should focus on potential efficiencies gained by either consolidating platforms under a single Service or by managing and operating platforms in more integrated manner and may include everything from acquisition parity/interoperability standards to more radical ideas (e.g., creating joint operational squadrons).

E. Use of Contractors

The use of contractors is widespread throughout DoD for UAS, which is understandable based upon the dramatic and rapid development of the associated demand. These systems have proven beneficial, but, since they are not part of a program of record, sustainability and integration across the force has been challenging. Although this study did not have access to the contract costs covering the wide range of GOCO/COCO UAS operations, efficiencies are likely through a more deliberate process. In addition, although contracts were often put in place as a response to an urgent need, these contracts often languished in their transition into a military operated program (e.g., Navy's use of ScanEagle contracts for almost a decade). While this study was focused on finding efficiencies within existing military UAS programs, further research is recommended on contract accountability not only for cost and meeting mission goals, but perhaps more importantly the Services' accountability in transitioning away from contracts in a timely manner when appropriate.

F. Summary

Based on the initial cost analysis performed, an in-depth costing analysis should be conducted, and this analysis should include full life-cycle costs vs. the annual cost summary estimation provided by FCoM. Analysis should focus on using civilian manpower in both the force mix proposals for launch and recovery operations and for providing each operational Air Force squadron a single "CAPs" worth (20 positions) of civilians for transit and non-kinetic ISR operations. From this initial analysis, the civilian conversion would be the most cost beneficial since previous results show a need to convert 2.5 CAPs worth of manpower to enlisted pilots to gain the same benefits as 1 CAP worth of government civilian pilots. However, detailed life-cycle analysis for the enlisted pilot cases could also provide baseline information to inform the appropriate decision makers.

While transitioning Air Force and Navy pilots to WO positions initially appears to provide annual savings, further cost analysis is required to not only show the full life-cycle costs for the individual positions, but also to include the cost of establishing such a rank structure within each of the Services for UAS operations (and if such a structure would extend beyond UAS into other career fields). Other staffing alternatives mentioned previously are either beyond the scope of this report (Total Force efficiencies) and/or are recommended for further research.

9. Summary

A. Overview

The purpose of this study was to identify alternative staffing strategies to not only accomplish DoD's current UAS-related missions in a more cost-effective way, but to also help inform and address manpower decisions for the future as current practices become unsupportable based on enterprise growth. By focusing on DoD's mission requirements, along with each individual Service's approach to UAS staffing, several opportunities were identified. While a majority of the Department's UAS missions are conducted similarly across the Services, definite unique approaches are used for the larger (Group 4/5) aircraft. While this paper outlines specific mission areas in which to gain efficiencies, the most notable savings came from considering government civilians as a viable option within the greater UAS enterprise.

This chapter summarizes the overall report and provides recommendations for further research. The preliminary costing results presented in this paper should be followed by an in-depth cost analysis providing full life-cycle costs vs. the FCoM annual cost saving estimations used in support of this analysis.

In terms of defining which individuals, or category of performers, currently conduct and/or are able to execute DoD UAS operations the following was observed.

- Only uniformed military officers can hold positions of command (includes LDOs and WOs).
  LDOs and WOs are subcategories to the officer corps used by some Services to focus on and capture long-term technical expertise.
- The Air Force lacks a WO force structure and, although authorized by Title 10, requires additional overhead to establish such a program. Similarly, the Navy lacks a flight WO program.
- The DoD expeditionary workforce is defined as a DoD civilian subcategory that is organized, trained, and equipped for expeditionary operations

For identifying statutory guidance constraints associated with defining the DoD UAS enterprise, the researchers used guidance primarily from Title 10, DoDD 1100.4 ("Guidance for Manpower Management"), and DoDI 1100.22 ("Policy and Procedures for Determining Workforce Mix"). While Title 10 outlines specific requirements in terms of generic missions (armor, infantry, strategic airlift, and so forth), it does not direct any one

Service to specifically maintain a UAS capability.[172] Nor does Title 10 direct a specific category of performer to conduct UAS operations.[173]

Title 10

Does NOT direct any singular Service to maintain a UAS program
Does NOT direct a specific category of performer to conduct UAS operations
Does NOT prescribe a percentage of force and/or rank to support UAS

While many intricacies are associated with workforce mix, DoD statutory guidance was distilled into the following three overarching questions in terms of the UAS task in question,

Force mix Analysis Questions

- Is the task inherently governmental?
- Is military incumbency required?
- Is the level of risk to force acceptable for civilians?

These questions built the framework for developing the decision tree in Figure 17 to analyze potential staffing alternatives. While this this generic roadmap is a simplification of the overall requirements, it helped define an appropriate balance across UAS missions and associated force integrated with elements of all categories of performers.

Using the decision tree in Figure 17 to review common mission elements associated with UAS operations highlighted several opportunities—specifically, the potential to use DoD civilians. As depicted in Figure 18, the only mission element that is not allowed for the civilian workforce is the employment of weapons. It was determined, however, that even in an organization responsible for weapons employment, there was an opportunity to balance its force between uniformed military and government civilians to meet mission requirements and take advantage of the associated manpower cost savings. While analysis also depicted that a contractor based force can conduct most of the mission elements,

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172 Example: Title 10, Volume III § 3062 and § 8062 outline Congress' intent for the Army and Air Force, respectively and, in some cases, outline generic structure (e.g., Army branches). However, it does not dictate a UA program. See Armed Forces, 10 U.S.C., Volume III § 3062 and § 8062.

173 For example Title 10 § 8067 dictates that Medical, Judge Advocate, and Chaplain services be performed by officers. There is no such designation for UA programs or even for pilots in general. This IDA paper does not advocate for such direction, but rather highlights the lack of Title 10 restrictions for an unrestricted development of alternative strategies within the constraints of existing generic manpower guidance. See Armed Forces, 10 U.S.C., Volume III § 8067.

without comparable contract data, the research team was unable to determine an appropriate cost comparison.

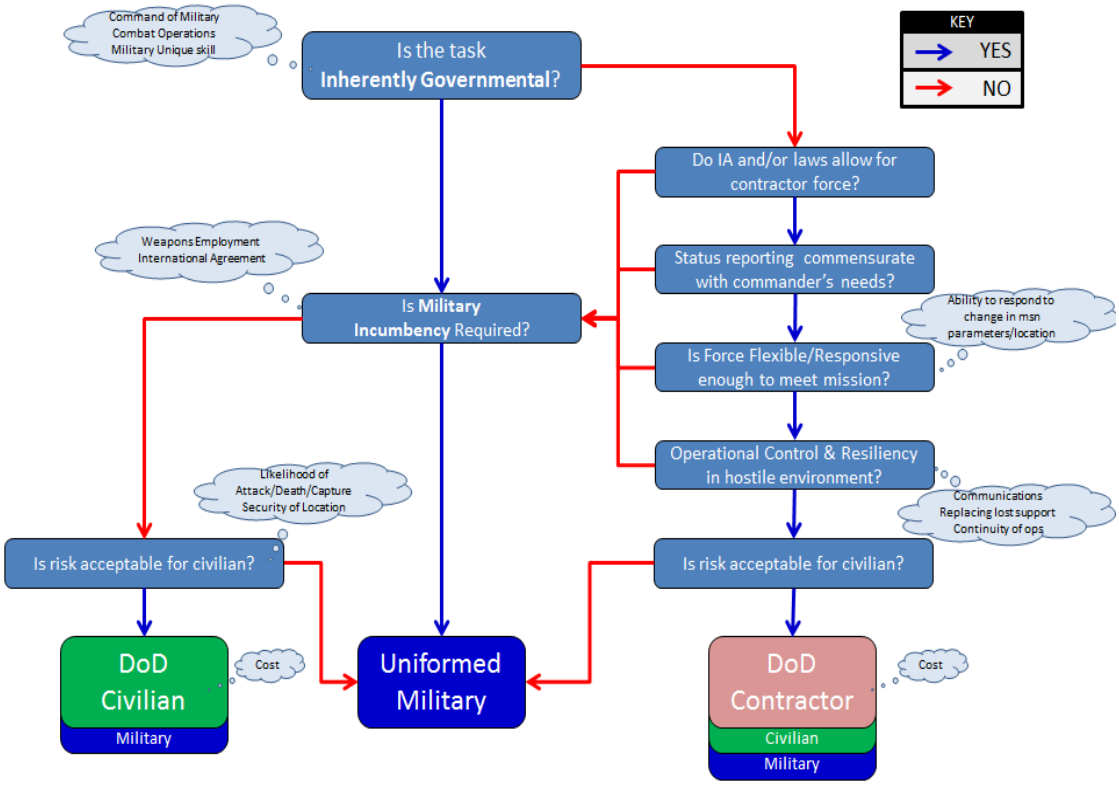

Figure 17. Category of Performer Decision Tree

Note: Subsequent analysis further breakdowns the military component into officer and enlisted subcategories.

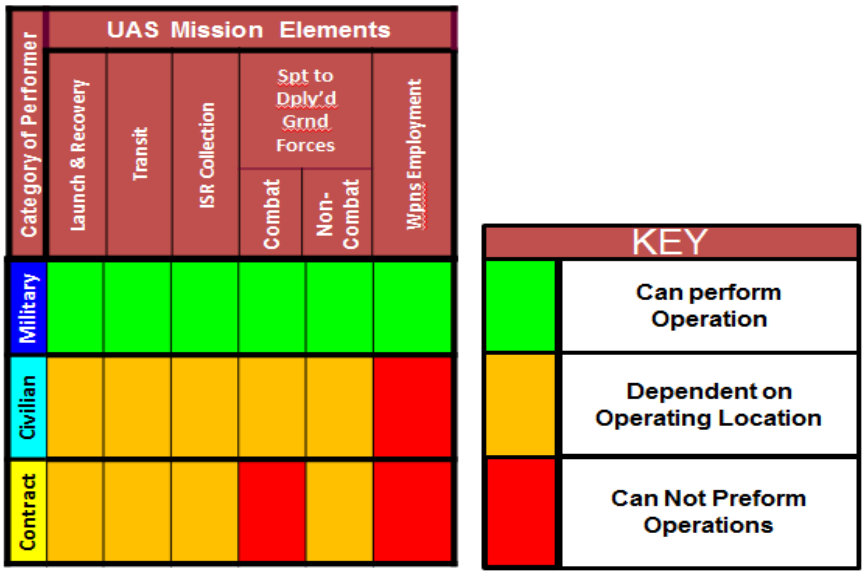

Figure 18. Summary of Mission Element Analysis

The review of individual Service's practices revealed that many UAS operations were staffed similarly across the Services; however, there are some notable differences. As seen in Table 22., one such difference is the reliance of the Army on WOs to provide leadership within their Group 3/4 UAS units, whereas the other Services rely on officers above the rank of O-1. In addition, while the Air Force and Marines have a dedicated Officer corps for UAS, the Navy and Army do not. The Navy relies on the use of previously qualified pilots from similarly tasked aircraft while the Army relies on its UAS WOs.

Table 22. Service Category of Performer Summary (Pilots)

Group	Air Force	Army	Navy	Marines
5	70% RPA AFSC	N/A		N/A
4	70% RPA AFSC	18% W.O.		N/A
3	N/A	13% W.O.	~10% IA	22% RPA Officer
2		N/A		
1				

KEY					
Officer (RPA/UAS MOS)	Officer (other)	W.O.	Enlisted	DOD Civilian	Contractor

AFSC: Air Force Specialty Code, IA: Individual Augmentees

Note: This table summarizes the primary focus of those pilots used to control the aircraft. The Air Force and the Navy have approximately one-half their Group 4/5 UAS force as enlisted sensor operators.

In an effort to better understand staffing methodology commonalities across the Services, the business rules in Table 23 appeared as universal across DoD and as platform agnostic.

Table 23. Business Rules for UAS Staffing

1	UAS operators assigned to a combat maneuver unit must be uniformed military personnel.
2	DoD civilians are not used to operate UAS.
3	"Officer equivalents'" are required for UAS operations within international airspace.
4	UAS sensor/mission payload operator positions are sourced solely with "enlisted equivalents."
5	Military officers are required for release authority of PGMs.
6	Cost of airframes and HD/LD nature of large UAS compel the use of officer pilots.

In addition to these business rules, the observations in Table 24 were identified additional discrepancies across the Services.

Table 24. UAS Staffing Observations

1	Service culture shapes how the roles and responsibilities are viewed for individual category of performers.
2	DoD-assigned missions/responsibilities and the anticipated operating environment shape how the Services view the role of their UAS.
3	The C2 concept of UAS operations (centralized vs. decentralized) and resultant authority required by aircrew relate directly to officer vs enlisted decision.
4	The Army stated the need for commissioned officer UAS career track or an additional skill identifier.
5	The Navy is the only Service that does not allow direct accessions to perform Group 4/5 pilot duties.
6	Demand for and development of UAS technology is in a period of exponential growth within the defense and commercial industries.
7	Maturation of technology will have an impact on the force presentation and staffing methodologies used within DoD's UAS enterprise.

As research continued to encounter the often emotional debate between the use of officers vs. enlisted, several aspects of this debate were considered in analyzing why the Services differed in their methodology. Distilling emotion and cultural biases from the equation, an illustrative model was used to depict the following three major aspects in deciding between officer vs. enlisted: (1) system complexity, (2) risk assumed and (3) operational environment.

Figure 19 illustrates the relationship between these events while also showing some of the attributes associated with each axis. The use of this illustrative relationship model helps to put the analysis of current Service practices and business rules into practice. While the analysis results that were discussed previously indicate that significant differences exist between Service staffing methodologies, the model in Figure 19 shows cases where such decisions are justifiable when viewed against the mission requirements of a particular Service's UAS force. While the choice to present forces using different categories of

performers is justifiable in some cases, analysis of this community highlights not only the ability to gain manpower efficiencies, but also the opportunity for increased cooperation across the Services to capitalize on lessons learned within the enterprise.

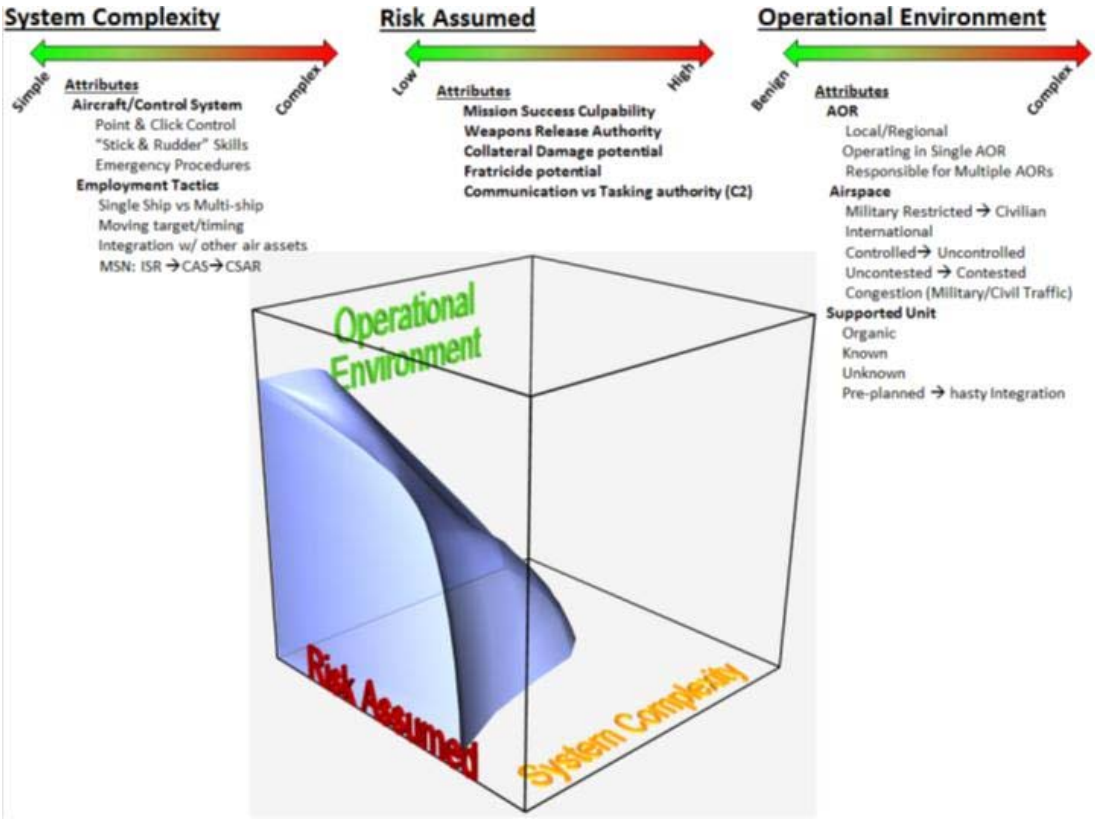

Figure 19. Complexity, Risk, and Environment Relationship

After defining business rules and identifying Service discrepancies and overall opportunities within the UAS enterprise, analysis turned to examining several workforce mix alternatives. As mentioned previously, the concept of considering government civilians as a viable option provided significant savings, especially when dedicating them to specific mission elements, such as conducting launch and recovery operations of Group 4/5 UAS. For the Air Force alone, if all of the launch and recovery assigned billets were transitioned to civilian positions, the annual savings would equate to $777,696 per LRE. Across all 15 assigned Air Force MQ-1/9 launch and recovery elements, this transition could account for an overall annual savings of approximately $11.7 million ($58.5 million over the FYDP).[174] However, it is operationally understood that an all-civilian LRE force would not meet Air Force requirements where risk, base defense requirement, and/or host

[174] Annual savings based upon FCoM numbers. See Appendix B. The $776,696 and $11.7 million totals are for full savings to the Federal Government. Savings specific to DoD are $610,776 and $9.16 million, respectively.

nation agreements require military personnel. With this in mind, Table 25 depicts a force mix alternative across the 15 USAF LREs which should meet operational requirements.[175] As seen with four all-military LREs, five 60-40, three 20-80, and three all-civilian, the total cost savings is approximately $5.1 million annually ($25.65 million across the FYDP) by transitioning approximately half (74 of 150) of the LRE positions from military to civilian.[176]

Table 25. Costing of USAF LRE Civilian/Military Force Mix

UTCs	Annual Cost/LRE		# of UTCs	Sub-total		Billets	
	DoD	Fed Gov		DoD	Fed Gov	Mil	Civ
RPA LRE UTC (All Mil)	1,283,861	1,592,561	4	5,135,444	6,370,243	40	0
LRE UTC (2 Civ + 3 Mil)	1,158,832	1,400,764	5	5,794,160	7,003,820	30	20
LRE UTC (4 Civ + 1 Mil)	804,398	979,562	3	2,413,194	2,938,686	6	24
RPA LRE UTC (All Civ)	673,085	814,865	3	2,019,255	2,444,594	0	30
Total for 15 All-Military RPA LRE UTCs				19,257,915	23,888,415		
Total for 15 Force mix RPA UTCs (as presented above)				15,362,053	18,757,343		
Delta (i.e., savings)				3,895,862	5,131,072		

Note: Delta is between mix depicted and all 15 military LREs.

In addition to launch and recovery operations, the use of civilians to support transit operations (flying UAS to and from target) was analyzed. For Air Force Group 4 RPA, it was determined that approximately 18% of each sortie was spent flying to and from the target. Allowing for schedule flexibility during 24/7/365 UAS operations, it was recommended that each Air Force operational squadron transition 1 CAPs worth of manpower to civilian positions (20 positions), understanding the same individuals can perform basic mission support up to but not including weapons employment. As Table 26 shows, approximately $1.57 million annually is saved by converting 1 CAP (20 billets) worth of manpower to DoD civilians.[177] If each of the 10 operational Air Force MQ-1/9 squadrons

175 A full mission analysis of Air Force LRE requirements was not conducted; however, this framework is general enough to meet a majority of Air Force LRE requirements based upon Group 4/5 LRE operations that typically occur in secure locations.

176 Ten Operational Squadrons does not include the MQ-1/9 Training squadron at Holloman AFB or the LR squadron at Cannon and Creech AFBs. Savings totals are for full savings to the Federal Government. Savings specific to DoD are $3.9 million annually and $19.48 million over the FYDP.

177 Since no model based upon mission analysis is available for the appropriate civil/military mix, best assumptions were made with the available data. Distribution of ranks and grades throughout the squadron was kept as close in line as possible with current Air Force RPA squadron structures.

did this conversion, total program annual savings could total $13.65 million ($68.3 million across the FYDP).[178]

Although it is intuitive that manpower costs are less when using enlisted positions vs. officers, analysis explained the rationale behind this decision. However, since this discussion will undoubtedly continue, Table 26 depicts various percentages of officer-to-enlisted conversions considered for the Air Force's MQ-1/9 RPA.[179]

Table 26. Cost Comparison of USAF RPA Squadrons Using Enlisted

USAF RPA Squadron	Annual Cost		Delta (i.e., savings)	Pilot Billets	
	DoD	Fed Gov		Officer	Enlisted
All Officer	14,223,874	17,557,834		50	0
20% Enlisted	13,610,200	16,944,160	613,674	40	10
30% Enlisted	13,312910	16,646,870	910,964	35	15
40% Enlisted	13,000,585	16,334,545	1,223,289	30	20
50% Enlisted	12,714,217	16,048,231	1,509,603	35	25
60% Enlisted	12,401,946	15,735,906	1,821,928	20	30

Note: See Appendix B for the breakdown of positions converted. Commander (1), Operation Officer (1), and Squadron Operation Center Billets (5) are not included in enlisted conversion. In addition, the Delta is the same for the Federal Government and DoD.

While the initial cost analysis used Air Force MQ-1/9 RPA units, based on the information available, savings are also possible when applied to UAS programs in the other Services. Based on the initial cost analysis performed, it is recommended that an in-depth costing analysis be conducted that includes full life-cycle costs vs. the annual cost summary estimation provided by FCoM. Analysis should focus on using civilian manpower within the UAS workforce in support of launch and recovery operations and non-kinetic transit/ISR operations.

B. Recommendations for Further Research

In addition to identifying manpower alternatives, specifically through the use of government civilians within the UAS enterprise, the research team identified the following areas for potential future research:

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178 Ten Operational Squadrons does not include the MQ-1/9 Training squadron at Holloman AFB or the LR squadron at Cannon and Creech AFBs. Savings represent savings to the Federal Government. DoD savings are $10.31 million annually or $51.58 million across the FYDP.

179 As mentioned previously, the Air Force's Staff Judge Advocate's (SJA) office has interpreted Title 10, § 8691 to state the Air Force can only use officers as rated pilots. See Armed Forces, 10 U.S.C., Volume III § 8691.

- Evaluate the accountability process to ensure that the contracts are temporary in nature where appropriate (e.g., Navy's use of contractors in support of UAS operations for over a decade).
- Evaluate staffing alternatives and potential manpower cost savings associated with the UAS maintenance force.
- Evaluate staffing alternatives and potential manpower cost savings associated with the intelligence processing, exploitation and dissemination workforce.
- Establish an Air Force WO program in terms of life-cycle costs and benefit.
- For the evolution of small UAS, determine how can/does the maturation of technology affect Service force presentation and staffing methodologies.
- Determine life-cycle costing for UAS career fields. Infancy of career field equates to a lack of data concerning life-cycle costs. Full study, to include civilian market impacts, is required to accurately estimate future government costs.
- Ensure the rapid development/acquisition of UAS systems. One unique aspect brought to UAS by SOCOM is the inherent ability for Special Operations Forces (SOF) to rapidly develop, acquire, and field emerging technologies. This capability brings dramatic changes to the entire UAS and holds the potential to change the level of support provided by smaller UAS.
- LDO career path: Open the Navy program to include UAS, create an LDO rank structure within the other Services, and/or open LDO accessions to the officer corps.
- Investigate potential efficiencies (manpower, resources, cost, and acquisition timelines) associated with consolidating similar Group 4/5 UAS platforms under a single service (i.e., MQ-1 and/or RQ-4 variants). Research should focus on consolidating platforms under a single Service or managing and operating platforms in more integrated manner. This approach may include everything from acquisition parity/interoperability standards to more radical ideas such as creating joint operational squadrons.

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Appendix A
Statutory Guidance Supporting Data

The following information provides the additional analysis information supporting Chapter 3.

A. Title 10 Foundation

Each Fiscal Year (FY), Congress approves the Department of Defense (DoD) budget, which defines the individual Services' authorized strength. U.S.C. Title 10 (hereafter referred to as Title 10) defines authorized strength as "the largest number of members authorized to be in an armed force."[1] Services are subsequently responsible for the application of that authorized strength across their respective core missions. Although Title 10 outlines specific requirements in terms of generic missions (armor, infantry, strategic airlift, and so forth), it does not direct any one Service to specifically maintain an Unmanned Aircraft System (UAS) capability.[2] Also, Title 10 does not direct a specific category of performer to conduct UAS operations.[3] Since budgetary constraints and mission requirements cause potentially large fluctuations in overall end strength and functional/technical component requirements, the following summary focuses on generic force mix statutory requirements rather than specific numbers or percentages of end strength, neither of which is specifically dictated by congressional and/or DoD statutory guidance.

While the authorized strength is defined by Service FY budgets, in accordance with Title 10, the Secretary of Defense is responsible for annually prescribing the total authorized active duty commissioned officers within each of the armed forces.[4] While Title 10 provides a table outlying the authorized force mix of field grade (O-4 to O-6) officers based upon overall officers allotted, the Service chiefs prescribe the strength of the individual

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[1] Armed Forces, 10 U.S.C., Volume I § 101(b)(11) (Washington, DC: U.S. Government Printing Office, July 2011), http://armedservices.house.gov/index.cfm/files/serve?File_id=7C199E0E-1614-497F-A818-B5D5B4BF33B5. The definition also includes "a component, a branch, a grade, or any other category of the armed forces," but the truncated definition suffices for this discussion.

[2] Example: Title 10, Volume III § 3062 and § 8062 outline Congress' intent for the Army and Air Force, respectively, and, in some cases, outline generic structure (e.g., Army branches). However, it does not dictate UA program. See Armed Forces, 10 U.S.C., Volume III § 3062 and § 8062 (Washington, DC: U.S. Government Printing Office, July 2011), http://armedservices.house.gov/index.cfm/files/serve?File_id=FC0173D5-F7D3-4D74-8D42-1B9E185B7C6B

[3] For example Title 10 § 8067 dictates that Medical, Judge Advocate, and Chaplain services be performed by officers. There is no such designation for UA programs or even for pilots in general. See Armed Forces, 10 U.S.C., Volume III § 8067.

[4] Armed Forces, 10 U.S.C., Volume I § 521.

category of active duty officers within their Service.[5] However, this allocation of personnel is kept at the Service level and is not prescribed across any singular mission set or functional capability (i.e., no percentage of force/rank is directed to support UAS programs).

B. Category of Performer Determination

Department of Defense Directive (DoDD) 1100.4[6] is based upon accomplishing national military objectives with a "minimum manpower that is organized and employed to provide maximum effectiveness ….[7] It further lists flexibility, adaptability and "responsive[ness] to crisis situations and new management strategies"[8] as further guiding principles. Programs must also be supported by long-range strategies that implement Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities (DOTMLPF) policy changes while still maintaining a ready force. In determining the appropriate manpower requirements, the following points summarize DoDD 1100.4 guidance:[9]

Functions that are inherently governmental shall not be contracted.

- Manpower management shall be **flexible, adaptive** to program changes, and **responsive to crisis situations** and new management strategies.
- Enable development of **combat-related skills** or to promote career development in military competencies.
- National military objectives shall be accomplished with a **minimum of manpower** that is organized and employed to provide **maximum effectiveness and combat power**.
- Assigned missions shall be accomplished using the **least costly mix of personnel** (military, civilian, and contract) consistent with military requirements.
- **Consider all available sources** when determining manpower mix to include the **Active and Reserve** military, **civilian** manpower; **intra-governmental, contract,** and host-nation support.

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5 Armed Forces, 10 U.S.C., Volume I § 523

6 Department of Defense, "Guidance for Manpower Management," DoDD 1100.4 (Washington, DC: USD(P&R), February 12, 2005), http://www.dtic.mil/whs/directives/corres/pdf/110004p.pdf.

7 Ibid., 2.

8 Ibid.

9 Ibid. Guiding principles are a synopsis of Section 3.2 and those that are found relevant to this study (emphasis added).

- **Manpower shall be designated as civilian except when military incumbency is required** for reasons of law, command and control of crisis situations, combat readiness, or esprit de corps; when unusual working conditions are not conducive to civilian employment; or when military-unique knowledge and skills are required for successful performance of the duties.[10]
- Sufficient manpower positions shall be **designated as civilian to develop competencies and skills that may not be taught or recruited directly from the private sector**.
- Manpower authorities shall designate **sufficient manpower to provide a rotation base** for military personnel.

While this relatively generic guidance dictates that force management strategies are appropriately driven by mission requirements and associated manpower costs (both addressed later in the analysis), DoDI 1100.22, "Policy and Procedures for Determining Workforce Mix," builds upon this direction and further outlines the delineation of manpower between uniformed military and civilian:[11]

Manpower shall be designated as civilian except when on or more of the following conditions apply:

- Military-unique knowledge and skills are required for performance of the duties.
- Military incumbency is required by law, E.o. [*sic* E.O.], treaty, or IA [international agreement].
- Military performance is required for command and control, risk mitigation, or esprit de corps.[12]
- Military manpower is needed to provide for overseas and sea-to-shore rotation, career development, or wartime assignments.
- Unusual working conditions or costs are not conducive to civilian employment.

These five principles provide a relatively simple outline for the delineation between uniformed military and DoD civilian, although the associated threshold for each remains

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[10] Exemption for "esprit de corps" is further defined in Department of Defense Instruction (DoDI) 1100.2. It provides examples such as military bands, honor guards, Navy Blue Angels, military recruiters, and so forth. See Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22 (Washington, DC: USD(P&R), April 12, 2010), 37–38, http://www.dtic.mil/whs/directives/corres/pdf/110022p.pdf.

[11] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 3.

[12] See Footnote 10.

open to a wide set of interpretations. Analysis within this paper analyzes these thresholds against current Service missions and associated practices.

C. Inherently Governmental (IG)

Within DoDI 1100.22, the following table (Table A-1) is provided as an overview to assist DoD manpower analysts in making the appropriate determination. The term "exemption" is used throughout the table and subsequent discussion as that manpower that is exempted from private sector performance and is therefore IG.

Table A-1. Manpower Mix Criteria

A	Direction and Control of Combat and Crisis Situations		
B	Exemption of Combat Support and Combat Service Support due to Operational Risk		
D	Exemption of Manpower Dual-Tasked For Wartime Assignments		
E	DoD Civilian Authority Direction & Control	F	Military-Unique Knowledge & Skills
G	Exemption for Esprit de Corps		
H	Exemption for Continuity of Infrastructure Operations	I	Military Augmentation of the Infrastructure During War
J	Exemption for Civilian & Military Rotation	K	Exemption for Civilian & Military Career Development
L	Exemption by Law, Executive Order, Treaty or International Agreement		
M	Exempted by DoD Management Decision		
P	Pending Restructuring of Commercial Activities		
R	Subject to Review for Public-Private Competition		
W	Non-Packageable Commercial Activity		
X	Alternative to Public-Private Competition		

Source: Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 12.

While this paper will not revisit the entire breakdown of the associated criteria, a synopsis of five pertinent criteria is provided to aid in future analysis.[13]

- **Direction and Control of Combat and Crisis Situations**. The following are aspects of these criteria that are all IG.
  - Command of military forces.
  - Operational control of combat, combat support, and combat service support units. Unlike civilians, military personnel must obey all lawful orders at all times and cannot quit or abandon their duties. Although civilians supporting combat operations may find themselves subject to the Uniform Code of Military Justice (UCMJ), only a military commanding officer can exercise that authority.
  - [Conduct of] combat operations. Not only is this criteria IG, but it must also be conducted by designated military forces (i.e., not DoD civilians). "When armed fighting or use of force is deemed necessary for national defense, the Department of Defense may authorize deliberate destructive and/or disruptive action …"[14] with the intent to destroy a hostile force or other military objective by means of employing "firepower and other destructive and disruptive capabilities."[15] Combat is also IG because we must hold military commanders and their forces "*accountable* for the appropriate and controlled use of combat power and adherence to rules of engagement and the law of war."[16] It is also crucial that military commanders execute "*discretionary judgment, leadership, knowledge, and discipline* necessary to perform effectively and responsibly *under fire*."[17]

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[13] Enclosure 4 of DoDI 1100.22 provides an in-depth review of all the criteria listed in Table A-1.

[14] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 18.

[15] Ibid.

[16] Ibid., (emphasis added).

[17] Ibid., 19 (emphasis added).

The description of this IG criterion states specifically that

> … manpower shall be designated military … if the *planned use of destructive combat capabilities is part of the mission* assigned to this manpower …. This includes manpower located both *inside and outside a theater of operations* if the personnel operate a weapon system against an enemy or hostile force (e.g., bomber crews, intercontinental ballistic missile crews, and *unmanned aerial vehicle operators*). This does not include technical advice on the operation of weapon systems or other support of non-discretionary nature performed in direct support of combat operations.[18]

– Security in hostile or volatile areas. Some security operations can be considered commercial; however, in general, if the security is provided for operations in "uncontrolled, unpredictable, unstable, high risk, or hostile environments" that function is considered IG.[19] The guidance further states that if there is a "*high likelihood of hostile fire, bombings, biological or chemical attacks*"[20] and the discretionary use of deadly force is expected, private security contractors are not authorized because this is an IG operation.[21] This section also includes operations that entail assisting, reinforcing or rescuing military and/or private security contractors.[22] Also, the security support is IG if "an offensive response to hostile acts or demonstrated hostile intentions would be required to operate in, or move resources through, a hostile area of operation."[23] The instruction further discusses the discretion during operations and when it drives IG operations. Manpower should be IG if "decisions on the appropriate course of action would require substantial discretion, the *outcome of which could significantly affect U.S. objectives* with regard to the life, liberty, or property of private persons, *a military mission*, or *international relations*."[24]

  Finally, this subsection of combat does address the role of contractors within combat support roles and the difference between self-defense and IG offensive operations. It provides the example that support organizations within a

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[18] Ibid., (emphasis added).

[19] Ibid.

[20] Ibid., (emphasis added).

[21] Ibid., 20 (emphasis added).

[22] Ibid.

[23] Ibid.

[24] Ibid., (emphasis added).

fielded military organization—Marines in this case—have an IG function because they must be armed and are expected to conduct offensive operations at any moment when attacked. However, as stated within the instruction, "if a military Service has a *new weapon system* available for use during hostilities, but *sufficient numbers of military maintainers are not yet trained*, the commander might be able to use contract maintenance in a *secure compound* without degrading the operational capability of the system. In such cases, only the IG security forces at the compound are coded [IG]. However, in such cases, contractor personnel may be issued weapons for self-defense."[25]

- **Exemption of CS [Combat Support] and CSS [Combat Service] Support due to Operational Risk.** This criterion expands on some of the combat criteria discussed previously. Support activities are considered IG if, in the judgment of the commander, any of the following are true:
  - Threat level could increase and military personnel would be needed on short notice to provide or augment a military capability.[26]
  - There would be an unsafe number of personnel in hostile area who are not combatants.[27]
  - DoD civilians or private sector contractors will not or cannot continue to perform their work. Includes, but is not limited to, work stoppage due to increased threat level, duration of hostilities, and/or a change in host nation support agreements. Also includes commander's discretion if "there is too great a risk that a contractor would default or not comply with the rules on the use of force."[28]
  - **There is too great a risk that an encounter with an enemy or hostile force would lead to hostilities** and necessitate assistance, reinforcement or rescue.[29]
  - DoD civilians will conduct IG work typically thought of as a commercial activity if their position is "**E-E [emergency-essential]** manpower that provides continuity of operations for essential functions, maintains the availability of combat-essential systems or performs duties critical to combat

[25] Ibid., 21 (emphasis added).

[26] Ibid., 24.

[27] Ibid.

[28] Ibid.

[29] Ibid., (emphasis added).

operations in overseas locations during a crisis when other civilians are evacuated."[30] These positions are IG when they cannot be vacated or eliminated during a mobilization or other national emergency without seriously impairing the ability of the activity to function effectively. Examples include "supply and maintenance of strategic weapons system … [and] logistical support elements that deploy to hostile areas."[31]

- **Exemption of manpower dual-tasked for wartime assignments.** This criterion is summarized as those functions conducted during peacetime that could easily be accomplished by the commercial sector. However, in the event of a contingency, that function/position is required to mobilize and conduct an IG function (typically those described previously).[32]
- **DoD civilian authority, direction, and control.** This criterion focuses on functions that, although conducted by civilians, are directly and ultimately accountable for accomplishment of missions and/or discretionary exercise of DoD authority.[33] It also includes the IG requirement for those positions where "Defense officials require the incumbent's judgment and insight to make informed decisions and preclude sole reliance on contract advisory assistance."[34]
- **Military-unique knowledge and skills.** This criterion includes manpower that "directs and controls intelligence and counterintelligence operations."[35]

D. Risk Assessment and Determining IG Activities

While the criteria listed in Chapter 3 provide a strong framework for deciding what is and what is not IG, many of these criteria can be contested when discussing UAS operations, especially with today's fiscally constrained environment. As such, the integration of risk analyses is critical to the process. DoDI 1100.22 states that when addressing contractual obligations, risk should be considered "to preclude ceding governmental control and authority of IG functions to the private sector where there is insufficient public **accountability and transparency**."[36] It also discusses analyzing the **operational/ logistical "footprint**" associated with various workforce mix solutions as an overly large

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[30] Ibid., 26 (emphasis added).

[31] Ibid.

[32] Ibid.

[33] Ibid., 28.

[34] Ibid., 29.

[35] Ibid., 36.

[36] Ibid., 46 (emphasis added).

footprint could limit flexibility and introduce an unacceptable level of risk.[37] In addition to these considerations, the following key points summarize the risk factors associated with analyzing risk associated with the command and control of possible workforce mix options:

- **Readiness reporting.** Commanders must have visibility of the readiness of critical support elements to judge the readiness of the military force to conduct and/or sustain military operations. The instruction (DoDI 1100.22) recommends analyzing historical records/studies to indicate whether contractors or DoD emergency-essential employees "perform satisfactorily under environmental conditions, threat levels and for the length of time required.[38]"
- **Replacing lost support.** This loss may be due to combat loss (for this study, an aircraft and/or operator) and/or contractual failure to support. Planners must determine whether alternate sources of support can be obtained in-house or from an alternate private sector provider in the time required for operations.[39]
- **Continuity of operations during hostilities**. Can a contractor sustain operations during hostilities and adjust to situations in which employees are killed or injured, equipment is damaged or destroyed equipment, employees have to be rotated during protracted conflict, and so forth?[40]
- **Operational control in hostile environments**. This factor is closely related to the criteria described under "Exemption of CS and CSS Support due to Operational Risk." In this section, the instruction raises several key points focused on individual/unit performance once attacked and/or involved in hostilities. In first addressing the risk of non-performance, it highlights that although contractors and DoD civilians fall under the UCMJ during war or qualifying contingency operations, the articles dealing with desertion and absence without leave apply specifically to "a member of the armed force"[41] and likely do not apply to civilians. Therefore, the instruction points out that "DoD civilian and DoD contractor employees arguably may quit their jobs or not perform their duties without risk of criminal prosecution under the UCMJ."[42] It also points out that misbehavior before the enemy also only applies to a uniformed military member. This misbehavior includes things such as "running away and cowardly conduct in the

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[37] Ibid., 53(emphasis added).

[38] Ibid., 49.

[39] Ibid.

[40] Ibid.

[41] Ibid., 50.

[42] Ibid.

presence of the enemy and not affording all practicable relief and assistance to other troops when engaged in battle."[43]

This portion of the risk assessment also addresses the need for a military commander to have direct control and unconstrained access/use of all personnel to reconstitute essential support functions after an attack. The need for flexibility and responsiveness is paramount during these situations.

> Commanders often cannot compel DoD civilians or contractor employees to perform work or assume risks that were not agreed upon under the terms of their employment or covered in the terms of the contract. In emergency situations, a military commander may direct DoD civilians to take lawful actions. However, a military commander may only direct contractor employees to take lawful actions so long as those actions do not require them to assume IG responsibilities and the actions are covered by the terms of the contract.[44]

This same consideration is similar when looking at the responsiveness required by military commanders during times of conflict. Since contractor employees do not fall under the direct supervision of the military commander, a contracting officer serves as the liaison between the commander and the contract employee's employer, who is ultimately responsible for that employee's performance. These added layers and separate "contractual lines of authority could hamper or overly complicate the commander's control and constitute an inappropriate risk."[45]

- **Discipline authority.** As mentioned previously, during a declared war or qualifying contingency operation, contractors may fall under UCMJ jurisdiction; however, limits related to the overall guidance associated with the implementation of that jurisdiction "could overly complicate operations in high-risk situations."[46] These limits can also present challenges in the case where a contractor force may not be held to the same level of professionalism one desires by a force conducting operations in a foreign sovereign nation, which could entail everything from lewd contact to disrespect of another's culture.
- **Restrictions due to laws and IAs.** While IAs, such as a Status of Forces Agreement, will often dictate the jurisdiction and interactions concerning military and civilian personnel, there may be situations where these guidelines do not exist or

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[43] Ibid.

[44] Ibid., 50–51.

[45] Ibid., 51.

[46] Ibid.

do not cover all situations applicable. In these cases, civilians may find themselves subject to the host nations laws and jurisdiction. An additional consideration for the use of civilians is the Law of War. Civilians authorized to operate with armed forces may be captured. This capture is not a violation of the Law of War, and they are entitled prisoner of war (POW) status. They may also be armed to provide self-defense; however, they can then also be targeted in the event they are taking a direct part in hostile activities.[47]

E. Kinetic Weapons Employment Notes

Although this paper limits the discussion of UAS weapons employment to those that are offensive in nature, it does not negate the use of offensive firepower under "self-defense" Rules of Engagement (ROE) (i.e., employing weapons from an UAS in support of another force currently under, or impending, attack). However, this paper contends that when employing weapons under such conditions (i.e., Self-Defense (of others) ROE), this situation is an offensive employment and requires military personnel. This paper does not consider self-defense of the UAS itself (i.e., employing weapons on a surface to air threat) justification for a non-military crewmember to employ weapons.[48] In addition, when discussing weapons employment, this paper refers to those weapons that are kinetic in nature (i.e., depart the UA (examples: AGM-114 "Hellfire" missile or GBU-12 laser-guided bomb)). For this paper, the employment of kinetic weapons also includes providing terminal guidance for said weapons. For example, a UA that provides the laser energy to guides a weapon(s) to the intended target would be conducting kinetic weapons operations. As technology and UAS capabilities increase, the use of the UAS itself, typically a smaller UA, as a weapon is also feasible. Such an employment is also included as "kinetic" in this discussion.[49]

Historically, the scope of who is considered "involved" in such kinetic operations has also been debated. This paper limits the scope to the physical act of commanding (i.e., "squeezing the trigger") the following: (1) release of the weapon(s) and/or (2) terminal

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[47] Ibid.

[48] This legal concept is one that can be debated and one on which additional research can be executed. This paper recommends that if an unmanned aircraft (UA) is operating within a threat, or anticipated threat, where Self Defense ROE against a surface to air threat is possible, the appropriate crew manning for such a mission is military, thereby removing the necessity of swapping crews for employment. Such a swap is likely ill-timed and can create additional operational confusion.

[49] This paper does not address any "non-kinetic" weapons employed in various forms of electronic warfare (EW), electronic attack (EA) and/or computer network attack (CNA). ROE for these operations should follow those established for similar operations. For example, if a CNA capability is somehow employed from, and by, an UA crew, the determination for category of performer should mirror that of the Cyber community. In addition, the issue of non-uniformed military/DoD civilian UAS crew/operators passing coordinates, information and/or a target description that would enable a subsequent strike(s) is also not addressed since it is beyond the scope of this paper.

guidance (e.g., firing laser energy). Also included is the Aircraft Commander during such operations (if/when this individual is different from the person squeezing the trigger). Supporting positions outside of these functions, such as those who provide intelligence for the strike, remain under the policies and practices of those respective functions and career fields.

While the statutory guidance outlined in DoDI 1100.22 is quite clear about military incumbency required to "operate a weapon system against an enemy or hostile force,"[50] the following concept was used by researchers to further amplify and clarify the role of kinetic weapons employment and terminal guidance (as discussed in Chapter 3):[51]

> Uniformed military personnel are required for all UAS operations which include the employment of, and/or provide terminal guidance to, kinetic weapons. Military incumbency is also required for those operations where the UAS crew is in direct support of forces that face the potential of, or are directly engaged in, armed hostilities.

This concept highlights the importance that the Services place on the military incumbency required when UAS crews are directly supporting forces engaged in, or face the near-term potential of, hostilities. It is derived from the belief that the decisions and contributions made by the UAS crew in the act of such support, whether their aircraft is armed or not, have a great influence on the outcome and likely survival of those supported forces (e.g., UAS aircrew informing ground forces which direction suspected enemy fire is coming from). As such, this type of operation not only represents the "exercise of substantial discretion when applying Federal Government authority"[52] as defined by DoDI 1100.22 for IG activities, but is also so inherently a part of combat operations that it drives the requirement further to one of military incumbency

F. UAS Force Mix Principles and Definitions Derived

1. Hierarchy of Performers

Statutory guidance makes it clear that IG functions cannot be contracted and that DoD civilians cannot function in roles where military incumbency is required. Through this same guidance, it is implied that there is a hierarchy of the manpower categories of performers. While DoD civilian employees are the preferred solution when appropriate for

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[50] Department of Defense, "Policy and Procedures for Determining Workforce Mix," DoDI 1100.22, 19.

[51] Ibid.

[52] Ibid., 13.

non-warfighting Combatant Command requests for forces,[53] if it is appropriate for a DoD civilian, a military member can also fill that role. Conversely, if the function is IG, it cannot be filled by a contracted manpower. Those roles that are appropriate for a contractor can be filled by either a DoD civilian or uniformed military member; however, those functions that require military incumbency can by definition only be fulfilled by uniformed military personnel.

2. Mission-Focused IG Criteria

In determining whether DoD UAS operations are IG, we look specifically at the mission-focused criteria, pertinent to this paper, as listed in Chapter 3:

Key Mission Focused Criteria for IG Determination

- Command of military forces
- Operational control of combat, combat support, and combat service support units
- Conduct of combat operations
- Peacetime commercial function that, in the event of a contingency, is required to mobilize and conduct an IG function
- Ultimately accountable for accomplishment of missions and/or discretionary exercise of DoD authority
- Military-unique knowledge and skills

Focusing specifically on these key mission elements, the first element is rather straightforward: if a position is responsible for the command of military positions, then it also must be military. The next two elements require a definition of the term "combat" in the context of a UAS program. While the employment of weapons from a UA is easily seen as combat, a few specific points require attention. For example, if a UA is armed but there is no possibility of it engaging in weapons employment, does it have to be operated by the military? If a UAS is flown remotely from the Continental United States (CONUS) but is watching ground/naval troops engage in armed conflict on foreign soil/water, does that cross the threshold for "combat ops" in determining whether the mission is IG? Does the determination change if the UAS is simply collecting intelligence and no U.S. or allied ground/naval forces are present? This paper contends that there is a difference, and, while there will always be an element of "it depends," the following definition is provided to clarify the issue in future analysis. In defining combat for associated UAS programs, it was

[53] Department of Defense, "DoD Civilian Expeditionary Workforce," DoDD 1404.10 (Washington, DC: USD(P&R), 29 January 2009), 3, http://www.dtic.mil/whs/directives/corres/pdf/140410p.pdf.

found this issue was closely tied to the criteria associated with the discretionary exercise of DoD authority. A UAS tasked on a relatively benign mission of collecting video and/or signals intelligence is, in the view of this paper, vastly different from a UAS responsible for the integration with and successful completion of a ground/ naval unit engaged in hostilities. While no specific statutory guidance "spells it out," this paper contends that if U.S. (or allies) forces involved in hostilities are directly supported by UAS, the intent of the statutory guidance is to have that responsibility for mission success in the hands of the U.S. government. Therefore, it is an IG function.

UAS Combat. UAS program activities are considered combat related if there is a possibility that the UAS crew member will be responsible for the employment of kinetic weapons.[54] Also included are operations where the UAS crews are in direct support of forces that face the potential of, or are directly engaged in, armed hostilities.

Therefore, in terms of IG criteria, combat-related operations and/or positions responsible for the operational control of units conducting such operations must be IG.

Turning back to the original questions posed about combat and weapons employment, it was also determined that operating a UA with weapons on board and the actual employment of those weapons are different. Comparing the operation of an armed UA with the transportation of ammunition, the dividing line between IG and non-IG comes in the physical employment of said weapons. As future analysis will show, this delineation is important when looking specifically at the larger UAS launch and recovery operations.

The final two mission-focused criteria are the most subjective. These criteria are easily debated and require full analysis when looking at alternatives. For example, is the launch and recovery of a UAS a "military-unique" skill? Since several civilian companies are now operating UAS, one could easily assess this as "no, it is not IG." However, one could also assess that although operating a UAS is a commercial skill set, it is also one required to mobilize in the event of a contingency.[55] The decision then focuses on whether the mobilized mission constitutes an IG activity. Once again, it depends. In analyzing

[54] As mentioned previously, this paper limits the scope of employing weapons to the physical act of commanding (i.e., "squeezing the trigger") the following: (1) release of the weapon(s) and/or (2) terminal guidance (e.g., firing laser energy). Also included is the Aircraft Commander during such operations (if/when individual is different from the person "squeezing the trigger"). Supporting positions outside these functions, such as those who provide intelligence for the strike, remain under the policies and practices of those respective functions and career fields.

[55] In the event that the UAS operated at the launch and recovery element requires the crew to employ weapons in an offensive posture, the function would indeed become IG.

alternatives, this paper has used these two criteria. However, doing so has not provided a clear black and white line, but rather shows that alternatives must be analyzed based on the mission requirements and potential operational environment.

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Appendix B
FCOM Costing Reports

Organization Comparison Summary				
Organization Name	**Calendar Year**	**Cost to Component**	**Department of Defense**	**Cost to Fed. Govt.**
USAF RPA LRE UTC (2 Civ+3 Mil)	2014	$1,073,677.99	$1,158,831.99	$1,400,763.99
USAF RPA LRE UTC (All Military)	2014	$1,144,650.76	$1,283,860.76	$1,592,560.76
USAF RPA LRE UTC (4 Civ+ 1Mil)	2014	$773,300.05	$804,398.05	$979,562.05
USAF RPA LRE UTC (Civilian)	2014	$669,014.53	$673,084.53	$814,864.53

USAF RPA LRE UTC (2 Civ+3 Mil) (2014)		
Cost to Component(s)	**Department of Defense**	**Cost to Fed. Govt.**
$1,073,677.99	$1,158,831.99	$1,400,763.99

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$114,941.37	$128,862.37	$159,732.37
2	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$282,542.34	$310,384.34	$372,124.34
2	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$331,638.10	$359,480.10	$421,220.10

Civilian GS Summary				
Billets	**PG | Step | Series | Location | Occupation | Component**	**Component**	**Department of Defense**	**Fed. Govt.**
2	GS5 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$91,249.64	$92,063.64	$120,419.64
2	GS11 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$165,599.20	$166,413.20	$194,769.20

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS5
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$45,624.82	$46,031.82	$60,209.82	$42,830.96

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$31,401.00
Component	OC11 Load Factor	$1,161.84
Component	Fringe Benefit Factor (OC12)	$11,429.96
Component	OC13 Load Factor	$628.02
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Detail - Civilian GS

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS11
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$82,799.60	$83,206.60	$97,384.60	$78,514.57

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,562.00
Component	OC11 Load Factor	$2,129.79
Component	Fringe Benefit Factor (OC12)	$20,952.57
Component	OC13 Load Factor	$1,151.24
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

USAF RPA LRE UTC (All Military) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$1,144,650.76	$1,283,860.76	$1,592,560.76

Military Summary - Air Force

Billets	PG | YOS | AFSC | Location	Component	Department of Defense	Fed. Govt.
1	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$114,941.37	$128,862.37	$159,732.37
2	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$175,414.68	$203,256.68	$264,996.68
1	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$165,819.05	$179,740.05	$210,610.05
4	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$565,084.68	$620,768.68	$744,248.68
2	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$123,390.98	$151,232.98	$212,972.98

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
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FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA LRE UTC (4 Civ+ 1Mil) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$773,300.05	$804,398.05	$979,562.05

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	E-7 | 1 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$93,783.32	$107,704.32	$138,574.32
1	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$165,819.05	$179,740.05	$210,610.05

Civilian GS Summary				
Billets	**PG | Step | Series | Location | Occupation | Component**	**Component**	**Department of Defense**	**Fed. Govt.**
4	GS5 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$182,499.28	$184,127.28	$240,839.28
4	GS11 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$331,198.40	$332,826.40	$389,538.40

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	1
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$93,783.32	$107,704.32	$138,574.32	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$33,030.00
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$10,701.72
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS5
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$45,624.82	$46,031.82	$60,209.82	$42,830.96

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$31,401.00
Component	OC11 Load Factor	$1,161.84
Component	Fringe Benefit Factor (OC12)	$11,429.96
Component	OC13 Load Factor	$628.02
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS11
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$82,799.60	$83,206.60	$97,384.60	$78,514.57

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,562.00
Component	OC11 Load Factor	$2,129.79
Component	Fringe Benefit Factor (OC12)	$20,952.57
Component	OC13 Load Factor	$1,151.24
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

USAF RPA LRE UTC (Civilian) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$669,014.53	$673,084.53	$814,864.53

Civilian GS Summary

Billets	PG | Step | Series | Location | Occupation | Component	Component	Department of Defense	Fed. Govt.
4	GS11 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$331,198.40	$332,826.40	$389,538.40
4	GS5 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$182,499.28	$184,127.28	$240,839.28
1	GS7 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$56,273.80	$56,680.80	$70,858.80
1	GS12 | 5 | 2181 | WORLDWIDE: WORLDWIDE | 2181: Aircraft Operation | Air Force	$99,043.05	$99,450.05	$113,628.05

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS11
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$82,799.60	$83,206.60	$97,384.60	$78,514.57

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,562.00
Component	OC11 Load Factor	$2,129.79
Component	Fringe Benefit Factor (OC12)	$20,952.57
Component	OC13 Load Factor	$1,151.24
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS5
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$45,624.82	$46,031.82	$60,209.82	$42,830.96

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$31,401.00
Component	OC11 Load Factor	$1,161.84
Component	Fringe Benefit Factor (OC12)	$11,429.96
Component	OC13 Load Factor	$628.02
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS7
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$56,273.80	$56,680.80	$70,858.80	$53,052.78

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$38,895.00
Component	OC11 Load Factor	$1,439.12
Component	Fringe Benefit Factor (OC12)	$14,157.78
Component	OC13 Load Factor	$777.90
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS12
Series	: 2181: Aircraft Operation
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$99,043.05	$99,450.05	$113,628.05	$94,106.45

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,993.00
Component	OC11 Load Factor	$2,552.74
Component	Fringe Benefit Factor (OC12)	$25,113.45
Component	OC13 Load Factor	$1,379.86
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries (OCONUS only)	$407.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

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Organization Comparison Summary				
Organization Name	**Calendar Year**	**Cost to Component**	**Department of Defense**	**Cost to Fed. Govt.**
USAF RPA MCE (All Military)	2014	$12,720,405.89	$14,223,873.89	$17,557,833.89
USAF RPA MCE (1 Civ CAP)	2014	$11,967,304.92	$13,192,352.92	$16,192,472.92

USAF RPA MCE (All Military) (2014)		
Cost to Component(s)	**Department of Defense**	**Cost to Fed. Govt.**
$12,720,405.89	$14,223,873.89	$17,557,833.89

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
49	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$6,922,287.33	$7,604,416.33	$9,117,046.33
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
10	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$616,954.90	$756,164.90	$1,064,864.90
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
10	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$952,249.30	$1,091,459.30	$1,400,159.30
14	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,227,902.76	$1,422,796.76	$1,854,976.76

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA MCE (1 Civ CAP) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$11,967,304.92	$13,192,352.92	$16,192,472.92

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
5	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$829,095.25	$898,700.25	$1,053,050.25
8	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$701,658.72	$813,026.72	$1,059,986.72
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
10	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$952,249.30	$1,091,459.30	$1,400,159.30
40	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$5,650,846.80	$6,207,686.80	$7,442,486.80
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
7	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$431,868.43	$529,315.43	$745,405.43
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
4	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$459,765.48	$515,449.48	$638,929.48

Civilian GS Summary				
Billets	**PG | Step | Series | Location | Occupation | Component**	**Component**	**Department of Defense**	**Fed. Govt.**
6	GS6 | 5 | 0006 | NATIONWIDE | 0006: Correctional Institution Administration | Air Force	$346,680.36	$346,680.36	$431,748.36
1	GS7 | 5 | 0006 | NATIONWIDE | 0006: Correctional Institution Administration | Air Force	$64,100.66	$64,100.66	$78,278.66
10	GS11 | 5 | 0006 | NATIONWIDE | 0006: Correctional Institution Administration | Air Force	$943,821.70	$943,821.70	$1,085,601.70
3	GS5 | 5 | 0006 | NATIONWIDE | 0006: Correctional Institution Administration | Air Force	$155,827.77	$155,827.77	$198,361.77

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS6
Series	: 0006: Correctional Institution Administration
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$57,780.06	$57,780.06	$71,958.06	$54,498.62

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$39,955.00
Component	OC11 Load Factor	$1,478.34
Component	Fringe Benefit Factor (OC12)	$14,543.62
Component	OC13 Load Factor	$799.10
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS7
Series	: 0006: Correctional Institution Administration
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$64,100.66	$64,100.66	$78,278.66	$60,565.69

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$44,403.00
Component	OC11 Load Factor	$1,642.91
Component	Fringe Benefit Factor (OC12)	$16,162.69
Component	OC13 Load Factor	$888.06
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS11
Series	: 0006: Correctional Institution Administration
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$94,382.17	$94,382.17	$108,560.17	$89,632.53

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$65,713.00
Component	OC11 Load Factor	$2,431.38
Component	Fringe Benefit Factor (OC12)	$23,919.53
Component	OC13 Load Factor	$1,314.26
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Position Attributes

Category	Selection
Year	2014
Military Component	Air Force
Pay Grade	GS5
Series	: 0006: Correctional Institution Administration
Step	5

Civilian Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Programmed Amount
$51,942.59	$51,942.59	$66,120.59	$48,895.31

Civilian Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,847.00
Component	OC11 Load Factor	$1,326.34
Component	Fringe Benefit Factor (OC12)	$13,048.31
Component	OC13 Load Factor	$716.94
Component	Training	$1,004.00
Component	Civilian Recruiting	$0.00
Component	Additional Labor Cost	$0.00
Department of Defense	Additional Labor Cost	$0.00
FED	Additional Labor Cost	$0.00
FED	Unfunded Civilian Retirement (CSRS only)	$8,350.00
FED	Postretirement Health Benefit	$5,805.00
FED	Postretirement Life Insurance	$23.00

Organization Comparison Summary				
Organization Name	**Calendar Year**	**Cost to Component**	**Department of Defense**	**Cost to Fed. Govt.**
USAF RPA MCE (All Military)	2014	$12,720,405.89	$14,223,873.89	$17,557,833.89
USAF RPA MCE (60% Enlisted Pilot)	2014	$10,898,478.03	$12,401,946.03	$15,735,906.03
USAF RPA MCE (50% Enlisted Pilot)	2014	$11,210,803.29	$12,714,271.29	$16,048,231.29
USAF RPA MCE (40% Enlisted Pilot)	2014	$11,497,116.70	$13,000,584.70	$16,334,544.70
USAF RPA MCE (30% Enlisted Pilot)	2014	$11,809,441.96	$13,312,909.96	$16,646,869.96
USAF RPA MCE (20% Enlisted Pilot)	2014	$12,106,732.04	$13,610,200.04	$16,944,160.04

USAF RPA MCE (All Military) (2014)		
Cost to Component(s)	**Department of Defense**	**Cost to Fed. Govt.**
$12,720,405.89	$14,223,873.89	$17,557,833.89

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
49	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$6,922,287.33	$7,604,416.33	$9,117,046.33
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
10	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$616,954.90	$756,164.90	$1,064,864.90
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
10	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$952,249.30	$1,091,459.30	$1,400,159.30
14	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,227,902.76	$1,422,796.76	$1,854,976.76

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Additional Labor Cost	$0.00
FED	Miscellaneous Expenses	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA MCE (60% Enlisted Pilot) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$10,898,478.03	$12,401,946.03	$15,735,906.03

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
20	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,233,909.80	$1,512,329.80	$2,129,729.80
28	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$2,455,805.52	$2,845,593.52	$3,709,953.52
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
16	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,523,598.88	$1,746,334.88	$2,240,254.88
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
19	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$2,684,152.23	$2,948,651.23	$3,535,181.23

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

USAF RPA MCE (50% Enlisted Pilot) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$11,210,803.29	$12,714,271.29	$16,048,231.29

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
26	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$2,280,390.84	$2,642,336.84	$3,444,956.84
15	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,428,373.95	$1,637,188.95	$2,100,238.95
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
18	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,110,518.82	$1,361,096.82	$1,916,756.82
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
24	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$3,390,508.08	$3,724,612.08	$4,465,492.08
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA MCE (40% Enlisted Pilot) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$11,497,116.70	$13,000,584.70	$16,334,544.70

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
14	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,333,149.02	$1,528,043.02	$1,960,223.02
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
23	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$2,017,268.82	$2,337,451.82	$3,047,461.82
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
17	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,048,823.33	$1,285,480.33	$1,810,270.33
29	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$4,096,863.93	$4,500,572.93	$5,395,802.93

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA MCE (30% Enlisted Pilot) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$11,809,441.96	$13,312,909.96	$16,646,869.96

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
13	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,237,924.09	$1,418,897.09	$1,820,207.09
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
34	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$4,803,219.78	$5,276,533.78	$6,326,113.78
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
15	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$925,432.35	$1,134,247.35	$1,597,297.35
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
21	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,841,854.14	$2,134,195.14	$2,782,465.14

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA MCE (20% Enlisted Pilot) (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$12,106,732.04	$13,610,200.04	$16,944,160.04

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
10	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$952,249.30	$1,091,459.30	$1,400,159.30
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
21	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,841,854.14	$2,134,195.14	$2,782,465.14
13	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$802,041.37	$983,014.37	$1,384,324.37
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
39	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$5,509,575.63	$6,052,494.63	$7,256,424.63
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Education Assistance	$419.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00

Organization Comparison Summary				
Organization Name	**Calendar Year**	**Cost to Component**	**Department of Defense**	**Cost to Fed. Govt.**
USAF RPA MCE (All Military)	2014	$12,720,405.89	$14,223,873.89	$17,557,833.89
USAF RPA Warrant Officer	2014	$11,413,607.62	$12,917,075.62	$16,251,035.62

USAF RPA MCE (All Military) (2014)		
Cost to Component(s)	**Department of Defense**	**Cost to Fed. Govt.**
$12,720,405.89	$14,223,873.89	$17,557,833.89

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
49	O-3 | 6 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$6,922,287.33	$7,604,416.33	$9,117,046.33
6	O-4 | 11 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$994,914.30	$1,078,440.30	$1,263,660.30
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
10	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$616,954.90	$756,164.90	$1,064,864.90
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
10	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$952,249.30	$1,091,459.30	$1,400,159.30
14	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,227,902.76	$1,422,796.76	$1,854,976.76

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-3
YOS	6
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$141,271.17	$155,192.17	$186,062.17	$140,318.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$64,983.60
Component	BAH	$21,575.00
Component	Retired Pay Accrual (RPA)	$21,054.69
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$9,912.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-4
YOS	11
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$165,819.05	$179,740.05	$210,610.05	$169,078.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$79,117.20
Component	BAH	$25,617.00
Component	Retired Pay Accrual (RPA)	$25,633.97
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$11,705.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Additional Labor Cost	$0.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

USAF RPA Warrant Officer (2014)

Cost to Component(s)	Department of Defense	Cost to Fed. Govt.
$11,413,607.62	$12,917,075.62	$16,251,035.62

Military Summary - Air Force				
Billets	**PG | YOS | AFSC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	E-9 | 20 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$144,742.76	$158,663.76	$189,533.76
14	E-5 | 6 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$1,227,902.76	$1,422,796.76	$1,854,976.76
10	E-3 | 2 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$616,954.90	$756,164.90	$1,064,864.90
1	O-5 | 16 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$191,064.79	$204,985.79	$235,855.79
1	O-5 | 14 | 18SxZ : SPEC OPS RPA PILOT | CONUS (Standard)	$183,529.11	$197,450.11	$228,320.11
1	E-5 | 6 | 3S2x1 : Education And Training | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
5	E-7 | 15 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$574,706.85	$644,311.85	$798,661.85
1	E-5 | 6 | 8T0x0 : Professional Military Education Instructor | CONUS (Standard)	$87,707.34	$101,628.34	$132,498.34
10	E-6 | 7 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$952,249.30	$1,091,459.30	$1,400,159.30
8	E-4 | 4 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$608,326.88	$719,694.88	$966,654.88
1	E-8 | 18 | 1N1x1 : Imagery Analysis | CONUS (Standard)	$128,312.23	$142,233.23	$173,103.23

Military Summary - Army				
Billets	**PG | YOS | MOS/AOC | Location**	**Component**	**Department of Defense**	**Fed. Govt.**
1	W-4 | 16 | -- | CONUS (Standard)	$154,259.26	$168,180.26	$199,050.26
26	W-2 | 5 | -- | CONUS (Standard)	$2,909,242.70	$3,271,188.70	$4,073,808.70
28	W-3 | 9 | -- | CONUS (Standard)	$3,546,901.40	$3,936,689.40	$4,801,049.40

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-9
YOS	20
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$144,742.76	$158,663.76	$189,533.76	$145,299.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$68,083.20
Component	BAH	$22,659.00
Component	Retired Pay Accrual (RPA)	$22,058.96
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$10,136.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-3
YOS	2
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$61,695.49	$75,616.49	$106,486.49	$51,365.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$23,025.60
Component	BAH	$5,218.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$7,460.29
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,186.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	16
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$191,064.79	$204,985.79	$235,855.79	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$95,688.00
Component	BAH	$27,471.00
Component	Retired Pay Accrual (RPA)	$31,002.91
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	O-5
YOS	14
MHA	CONUS (Standard)
AFSC	18SxZ : SPEC OPS RPA PILOT

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$183,529.11	$197,450.11	$228,320.11	$191,940.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$89,996.40
Component	BAH	$27,471.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$9,565.00
Component	PCS / Relocation	$6,461.00
Component	Miscellaneous Expenses	$13,157.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$29,158.83
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	3S2x1 : Education And Training

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-7
YOS	15
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$114,941.37	$128,862.37	$159,732.37	$108,811.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$49,010.40
Component	BAH	$20,284.00
Component	Retired Pay Accrual (RPA)	$15,879.37
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,962.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-5
YOS	6
MHA	CONUS (Standard)
AFSC	8T0x0 : Professional Military Education Instructor

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$87,707.34	$101,628.34	$132,498.34	$79,953.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$32,814.00
Component	BAH	$16,415.00
Component	Retired Pay Accrual (RPA)	$10,631.74
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$6,041.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-6
YOS	7
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$95,224.93	$109,145.93	$140,015.93	$94,747.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$35,578.80
Component	BAH	$19,271.00
Component	Retired Pay Accrual (RPA)	$11,527.53
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$7,042.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-4
YOS	4
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$76,040.86	$89,961.86	$120,831.86	$65,541.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$27,936.00
Component	BAH	$12,350.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$9,051.26
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$4,898.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00

Billet Attributes

Category	Selection
Military Component	Air Force
Year	2014
Pay Grade	E-8
YOS	18
MHA	CONUS (Standard)
AFSC	1N1x1 : Imagery Analysis

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$128,312.23	$142,233.23	$173,103.23	$123,131.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$57,211.20
Component	BAH	$21,669.00
Component	PCS / Relocation	$3,185.00
Component	Miscellaneous Expenses	$9,090.00
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$419.00
Component	Recruitment & Advertising	$590.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$18,536.43
Component	Basic Allowances for Subsistence (BAS)	$4,290.60
Component	Training	$9,565.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00

Billet Attributes

Category	Selection
Military Component	Army
Year	2014
Pay Grade	W-4
YOS	16
MHA	CONUS (Standard)

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$154,259.26	$168,180.26	$199,050.26	$165,050.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$72,406.80
Component	BAH	$23,741.67
Component	PCS / Relocation	$6,265.00
Component	Miscellaneous Expenses	$12,964.11
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$484.00
Component	Recruitment & Advertising	$1,611.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$23,459.80
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$6,616.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00

Billet Attributes

Category	Selection
Military Component	Army
Year	2014
Pay Grade	W-2
YOS	5
MHA	CONUS (Standard)

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$111,893.95	$125,814.95	$156,684.95	$122,848.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$44,398.80
Component	BAH	$20,298.53
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$6,616.00
Component	PCS / Relocation	$6,265.00
Component	Miscellaneous Expenses	$11,124.53
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$484.00
Component	Recruitment & Advertising	$1,611.00
Component	Additional Labor Cost	$0.00
Component	Retired Pay Accrual (RPA)	$14,385.21
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

Billet Attributes

Category	Selection
Military Component	Army
Year	2014
Pay Grade	W-3
YOS	9
MHA	CONUS (Standard)

Billet Costing Summary (Annual)

Cost to Component	Department of Defense	Federal Government	Rate
$126,675.05	$140,596.05	$171,466.05	$140,791.00

Billet Costing Details (Annual)

	Cost Type	Annual Cost
Component	Base Pay	$54,021.60
Component	BAH	$22,454.75
Component	Retired Pay Accrual (RPA)	$17,503.00
Component	Basic Allowances for Subsistence (BAS)	$2,954.88
Component	Training	$6,616.00
Component	PCS / Relocation	$6,265.00
Component	Miscellaneous Expenses	$11,008.82
Component	Medicare-Eligible Retiree Health Care (MERHC)	$3,756.00
Component	Education Assistance	$484.00
Component	Recruitment & Advertising	$1,611.00
Component	Additional Labor Cost	$0.00
Department of Defense	Discount Groceries	$407.00
Department of Defense	Child Development (Day Care Facilities)	$601.00
Department of Defense	DoDEA and Family Assistance	$1,865.00
Department of Defense	Miscellaneous Expenses	$0.00
Department of Defense	Health Care (AD and AD FM)	$11,048.00
Department of Defense	Additional Labor Cost	$0.00
FED	Child Education (Impact Aid)	$337.00
FED	Treasury Contribution to Retirement	$19,951.00
FED	Treasury Contribution for Concurrent Receipts	$1,979.00
FED	Treasury Contribution to MERHCF	$1,541.00
FED	Veterans Benefits (Cash and In-Kind)	$7,062.00
FED	Miscellaneous Expenses	$0.00
FED	Additional Labor Cost	$0.00

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Appendix C
Illustrations

Figures

Tables

Appendix D
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Appendix E
Abbreviations

A2CU	Air Force RPA Capabilities Division
ADP	Army Doctrine Publication
AETC	Air Education and Training Command
AFB	Air Force Base
AFQT	Armed Forces Qualification Test
AFRL	Air Force Research Laboratory
AFSC	Air Force Specialty Code
AFSOC	Air Force Special Operations Command
AGL	altitude above ground level
AGM	air-to-ground tactical missile
AGR	active guard and reserve
ASUW	anti-surface warfare
ASW	anti-submarine warfare
AVO	air vehicle operator
BAMS	broad area maritime surveillance
BDA	battle damage assessment
BLOS	beyond-line-of-sight
BUQ	basic UAS qualification
C2	command and control
C3	command, control, and communication
CAAF	contractors authorized to accompany the force
CAN	computer network attack
CAP	Combat Air Patrol
CAPE	Cost Assessment and Program Evaluation
CAS	close air support
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
COCO	contractor-owned, contractor-operated
CONOPS	concept of operations
CONUS	Continental United States
CS	combat support
CSAR	combat search and rescue
CSS	combat service support
CWO	Chief Warrant Officer
DoD	Department of Defense
DoDD	Department of Defense Directive
DoDI	Department of Defense Instruction
DOTMLPF	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities
DS	direct support
E.O.	Executive Order

EA	electronic attack
EOD	explosive ordnance disposal
EW	eelctronic warfare
FAA	Federal Aviation Administration
FCoM	Full Cost of Manpower
FL	flight level
FP	force protection
FY	Fiscal Year
FYDP	Future Years Defense Program
GBU	Guided Bomb Unit
GCS	ground control station
GOCO	government-owned, contractor-operated
GS	general support
	Government Service
HD/LD	high-demand, low-density
HHQ	Higher Headquarters
IA	international agreement
IAA	Incident Awareness and Assessment
IBCT	Infantry Brigade Combat Team
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
IG	Inherently Governmental
ISR	Intelligence, Surveillance, and Reconnaissance
JFC	Joint Force Commander
JMQ	joint mission qualification
JMTL	Joint Mission Task List
JSTARS	Joint Surveillance Target Attack Radar System
LDO	limited duty officer
LOS	line-of-sight
LR	launch and recovery
LRE	launch and recovery element
MAGTF	Marine Air Ground Task Force
MCE	mission command element
MDA	maritime domain awareness
MEF	Marine Expeditionary Force
MGySgt	Master Gunnery Sergeant
MIW	mine warfare
MOS	military occupational specialty
MPO	mission payload operator
MWS	Major Weapon System
NAS	National Airspace System
NAVSPECWARCOM	Naval Special Warfare Command
NCO	non-commissioned officer
OES	Occupational Employment Statistics
OMCM	organic mine counter measures
OSD	Office of the Secretary of Defense

OUSD(P&R)	Office of the Under Secretary of Defense for Personnel and Readiness
PCS	Private Security Contractor
PED	processing, exploitation, and dissemination
PGM	precision guided munition
PIC	pilots in command
POW	prisoner of war
PR	personal recovery
ROE	Rules of Engagement
ROTC	Reserve Officers' Training Corps
RPA	remotely piloted aircraft
RS	reconnaissance squadron (Air Force)
RSO	remote split operations
RSTA	reconnaissance, surveillance, and target acquisition
SAUS-O	SUAS operators
SCAR	strike coordination and reconnaissance
SEAL	Sea, Air, Land Teams
SJA	Staff Judge Advocate
SME	subject matter expert
SOCOM	Special Operations Command
SOF	Special Operations Forces
SOFA	Status of Forces Agreement
SUAS	small unmanned aircraft systems
TR	traditional reservist
TUAS	Tactical Unmanned Aerial Systems
U.S.C.	U.S. Code
UA	unmanned aircraft
UAS	Unmanned Aircraft System
UAV	unmanned aerial vehicle
UCAS	Unmanned Combat Air System
UCMJ	Uniform Code of Military Justice
UPT	undergraduate pilot training
URT	undergraduate RPA training
USAF	United States Air Force
USMC	United States Marine Corps
USSOCOM	United States Special Operations Command
UTC	Unit Type Code
VFR	Visual Flight Rules
VMU	unmanned aircraft squadron (Marine Corps)
VP	patrol squadron (Navy)
VUP	unmanned patrol squadron (Navy)
WO	warrant officer

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14. ABSTRACT

The purpose of this study is to identify alternative staffing strategies to accomplish the Department of Defense's (DoD) Unmanned Aircraft System (UAS)-related missions in a more cost-effective fashion. Research aimed at analyzing DoD's mission requirements along with the individual Service's approach to UAS staffing. Mission analysis identified various "business rules" applied across the DoD along with opportunities for cost savings. One of the most notable of these savings came from the use of a balanced workforce comprise of both uniformed military and government civilian. Specific opportunities rest within the larger unmanned aircraft systems where the AF alone could save a potential of approximately $94M across the FYDP by simply utilizing government civilians to appropriate mission elements. Analysis also reviewed the often emotional debate between the use of officers vs enlisted pilots and developed a model to depict three major elements for decision makers, 1) System Complexity, 2) Risk Assumed and 3) Operational Environment. While the Services' staffing choices are in some cases justifiable, analysis highlighted trade space to gain manpower efficiencies and increased Service cooperation. While this report offers an initial cost analysis, a full scale costing analysis for this burgeoning career field is recommended.

15. SUBJECT TERMS
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