

RECORD VERSION

STATEMENT BY

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COMMANDING GENERAL, US ARMY TRAINING AND DOCTRINE COMMAND**

BEFORE THE

**SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON AIRLAND**

SECOND SESSION, 114TH CONGRESS

**ON UNMANNED AIRCRAFT SYSTEMS OPERATIONAL DOCTRINE,
MANNING AND TRAINING**

MARCH 16, 2016

**NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES**

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Chairman Cotton, Ranking Member Manchin, and Members of the Subcommittee, I appreciate the opportunity to appear before you to discuss the doctrine, manning, and training of Army Unmanned Aircraft Systems (UAS) units.

Introduction

Army UAS provide assured, forward based organic support to the maneuver commander from the platoon to division level. On September 11, 2001, the U.S. Army UAS force consisted of only three companies and less than 200 Soldiers. Since then, the Army UAS force has grown to over 600 medium and large UAS, and over 6,500 small UAS operated by more than 7,000 Soldiers. To address this rapid expansion and continued growing demand, the Army is executing a comprehensive strategy to ensure that UAS formations are capable of meeting the challenges now and in the future. Today, I will highlight current Army UAS doctrine, manning, and training, as well as how the Army intends to continue to improve the warfighting capability of its UAS formations.

Army Unmanned Aircraft Systems (UAS)

The majority of today's Army UAS formations are designed and trained to operate at the brigade, division, and corps level. They primarily support Brigade Combat Teams at the operational and tactical level, and are fully integrated as a member of the combined arms team, executing joint combined arms maneuver and wide area security in support of the ground force commander. The remaining UAS formations provide strategic intelligence, surveillance, and reconnaissance (ISR), and precision strike in support of Global Force Management Allocation Plan (GFMAP) requirements for Army, Special Operations, and joint forces. Army UAS formations deploy to the theater and execute all aspects of their mission from within the area of operations of the supported units.

The Army divides UAS into two basic categories. The first category consists of the smaller, less complex systems operated by Soldiers, independent of military occupational specialty (MOS), who are selected and trained at the small unit level. The second category encompasses the larger, more capable systems operated by professional UAS Soldiers who are institutionally

trained, formally qualified, and assigned to maintain and operate Army UAS in UAS specific units.

The Army's smaller UAS are rucksack portable, hand-launched air vehicles that provide reconnaissance capabilities to battalion and below. These UAS are categorized as Group 1 UAS, meaning they weigh less than 20 pounds, fly at lower altitudes, are highly automated, and operate within line-of-sight of the operator. They provide a tactical reconnaissance capability to small units on the ground, allowing units to see beyond terrain features and inter-visibility lines to provide information collection and security. Group 1 UAS include the RQ-11B Raven and the RQ-20A Puma, which stay aloft for 1-2 hours while delivering basic full-motion imagery to a Soldier on the ground. Puma and Raven UAS operators can be any MOS and are trained by master trainers at the unit level. Group 1 master trainers are qualified instructors who are certified through a 140-hour Qualification Course at Fort Benning, Georgia. The Army possesses no Group 2 UAS systems.

The second category of UAS are the Army's larger, more capable systems (Group 3 and Group 4) that operate at higher altitudes and at distances typically beyond the line-of-sight of their launch and recovery locations. Because of the complexity of these systems and their associated missions, Group 3 and 4 are organized into specific UAS units. The Army's current Group 3 Tactical UAS is the RQ-7B Shadow, which supports brigade and below tactical requirements. The Army's Group 4 UAS, MQ-1C Gray Eagle, supports tactical, operational, and strategic requirements at the division and above level.

Group 3 and 4 UAS are fully integrated into Army intelligence, maneuver, aviation, mission command, and fires doctrine. Their purpose is to enable combined arms maneuver by increasing the maneuver force's mobility, lethality, survivability, and mission command. Today, over 4,500 Group 3 and 4 trained UAS Soldiers and Warrant Officers are assigned to 75 Shadow platoons and 10 Gray Eagle companies across the Army. These numbers will grow as the Army increases to 94 Shadow platoons and 15 Gray Eagle companies by the end of FY18.

Army UAS Force Structure and Missions

There is currently two UAS-specific formations in the Army for the Group 3 UAS (Shadow) and two UAS-specific formations for the Group 4 UAS (Gray Eagle). Shadow UAS are organized into platoons and assigned to either a Brigade Combat Team, a Heavy Attack Reconnaissance Squadron within the Combat Aviation Brigade, or Special Operations Units. The Gray Eagle

UAS are organized into two different company constructs and either assigned to the Combat Aviation Brigade in a Division or at Echelons Above Division (EAD).

The Shadow platoon is assigned to every Brigade Combat Team in both the Active Component and National Guard. These platoons are fully integrated into combined arms maneuver, and provide the commander with reconnaissance and surveillance capabilities to meet tactical maneuver and intelligence requirements. The Shadow platoon has 27 UAS Soldiers and four air vehicles, providing 18-24 hours of continuous UAS coverage to the supported commander. Combat Aviation Brigades also have three Shadow platoons assigned to each Heavy Attack Reconnaissance Squadron. These platoons also have 27 UAS Soldiers and four air vehicles that can provide 18-24 hours of coverage. These platoons are employed with the AH-64 Apaches to execute manned/unmanned teaming (MUM-T) for enhanced reconnaissance, security, and attack operations.

A divisional Gray Eagle Company is assigned to each of the active component Combat Aviation Brigades and provides tactical and operational commanders organic reconnaissance, surveillance, security, and attack capabilities. Gray Eagle Companies provide support to both the Aviation Brigade and divisional ground maneuver forces as a division-level capability. Organized to deploy as a unit and conduct operations from one or more locations within their division area of operations, the 127-Soldier Divisional Gray Eagle Company has 12 air vehicles and can provide up to four simultaneous 24-hour missions per day as a consolidated company, and three simultaneous 24-hour missions per day in a split-based configuration. Although designed to support Army division requirements, these formations have been recently deployed in support of combatant commanders separate from their divisions on a Request for Forces basis to fill GFMAP requirements for ISR.

The Army also possesses EAD Gray Eagle Companies, which are assigned to both the Intelligence and Security Command (INSCOM) and the Army Special Operations Aviation Command (ARSOAC). These companies are trained, equipped, and organized to conduct long-endurance, extended range, multidiscipline intelligence and precision strike operations to provide timely intelligence and destruction of high payoff targets in support to both Army and joint organizations. These Gray Eagle Companies also have 12 air vehicles, are larger than divisional companies, and are manned with a total of 165 Soldiers. This additional manning enables the EAD Gray Eagle Companies to conduct more split-based operations and are more

tailorable to meet GFMAP requirements. Currently, only one EAD Gray Eagle Company is fielded with three additional companies scheduled to be complete by FY18.

Army UAS Training

The centerpiece of the Army's UAS strategy is the Soldier. Army enlisted Soldiers and Noncommissioned Officers (NCOs), led by UAS Warrant Officers, operate and maintain our Group 3 and 4 UAS. UAS MOSs consist of 15W (UAS Operator) and 15E (UAS Maintainer) for enlisted personnel and NCOs, and 150U (UAS Operations Technician) for Warrant Officers. Soldiers who enter the UAS MOS must meet the highest standards, and achieve a surveillance and communications (SC) score of at least 105 on the Armed Services Vocational Aptitude Battery military entry exam. This score is the highest SC score for entry into any Army MOS. The U.S. Army Aviation Branch has been very successful with recruiting and enlisting highly qualified Soldiers for these positions.

Upon entry into the service, UAS operator and maintenance MOSs have a 6-year active duty service obligation contract that ensures service longevity of these quality enlistees after completion of their highly technical and tactical training. Upon completion of their initial enlistment, UAS Operators are currently offered a reenlistment bonus of approximately \$11,000 for an additional 5-year reenlistment to enable the Army to build senior NCOs as the force continues to grow.

Acquiring our UAS Warrant Officer leaders from the senior NCOs within the 15W UAS Operator enlisted feeder population ensures that our most experienced and capable UAS operators progress into senior leadership positions. Additionally, due to the inactivation of the OH-58D Kiowa scout helicopter fleet, we have also been able to transition over 100 of our Warrant Officer OH-58D pilots to transition into the 150U UAS Operations Technician field, infusing high quality aviators and aero scouts into this growing field.

UAS Soldiers and Warrant Officers attend a variety of Professional Military Education and functional training courses for qualification and further education. Aviation Branch Professional Military Education (PME) is continuously reviewed, and MOS qualification-critical tasks are continuously updated using lessons learned from both combat and training. Programs of Instruction in the UAS field, like the Warrant Officer Basic Course, the Warrant Officer Advanced Course, the UAS Maintainer Course, and the UAS Operator Course continue to evolve and improve as we expand our knowledge, along with the missions and roles of our UAS formations.

To address recent lessons learned, the Aviation Branch also added a UAS Platoon Leader Course for newly appointed UAS Shadow Platoon Leaders, and the Air Cavalry Leaders Course to provide hands on training for UAS and AH-64 Apache helicopter operators and leaders to gain greater proficiency in the employment of UAS while teamed with Apaches.

To ensure that we continue to develop the most capable personnel for this growing force, our UAS Institutional Training Center at Fort Huachuca, Arizona is staffed with the most qualified Soldiers, Marines, Department of the Army Civilians, and contractors. The Army UAS School at Fort Huachuca qualifies both UAS operators and maintainers, as well as U.S. Marine Corps and Australian Army Shadow operators, and serves as the center of institutional training efforts for initial qualification, advanced individual training courses.

The first phase of qualification training at Fort Huachuca consists of an 8-week common core course for all UAS operators. During this phase, UAS operators receive in-depth instruction on the fundamentals of aerodynamics, doctrine, risk management, mission planning, flight safety, and navigation. During the second phase of training, UAS operators conduct live and simulated flight training in either the Shadow or Gray Eagle UAS. Shadow operator training is a 10-week program of instruction, and the Gray Eagle operator training course is a 25-week program of instruction. Both courses are performance oriented and require operators to achieve mastery of their launch, pilotage, payload operation, mission, gunnery, and recovery skills prior to graduation. Army training standards are in compliance with the Basic UAS Qualification (BUQ) training requirements directed in Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3255.01. Because of the diversity of UAS designs and missions across DOD, CJCSI 3255.01 contains a broad range of applicable training certification requirements. Upon completion of the initial training courses at Fort Huachuca, Soldiers are then assigned to Army units. Once integrated with their new unit, Soldiers are incorporated into the unit commander's aircrew training program (ATP), which is designed to produce fully mission trained, combat-ready crewmembers. This training focuses on task proficiency at the individual, crew, and unit level to enable the execution of the collective mission essential tasks necessary to accomplish successful joint combined arms operations.

The ATP process in units consists of progressing through three readiness levels (RL). RL3 is refresher training, and focuses on training and demonstrating proficiency in basic UAS launch, recovery, and flight tasks. RL2 is mission training, and focuses on training and demonstrating proficiency in those tasks required to execute missions (reporting, air-ground operations,

acquiring and engaging targets, conducting reconnaissance, MUM-T, etc.). The third progression level is RL1. RL1 is continuation training. Once designated RL1, the UAS crewmember is responsible for maintaining proficiency in base, mission, and special tasks assigned by the commander, and must complete semiannual and annual task iterations in all modes of flight, as well as meet semiannual flying hour minimums. RL1 crewmembers must also complete and pass an annual standardization flight evaluation, medical evaluation, and operator's written examination.

As UAS Soldiers gain experience in their unit during home station training, combat training center rotations, and deployments, UAS operators are further evaluated and certified as aircraft commanders. UAS Aircraft Commanders serve as the unit's first level trainer, and are responsible for all operational and training aspects of a specific mission, as well as the safe operation of the UAS by the other crew members. The Aircraft Commander (AC) program is designed to ensure that the designated aircraft commander possesses the maturity, experience, and skill proficiency required to execute their duties.

After designation as an AC, the next step for a UAS operator is designation as a UAS Instructor Operator (IO). Prerequisites for a Soldier to attend the IO course are 200 or more actual flight hours, as well as demonstrated maturity, judgment, and operator proficiency. As we continue to grow the UAS force, the IO course prerequisites serve as initial screening criteria for course attendance. To ensure the quality of the prospective IOs, candidates must also pass a proficiency flight exam and written test and receive a commander's recommendation for attendance. The Soldier must then satisfactorily complete all course requirements for designation as an IO.

No waivers have ever been given for schoolhouse instructor pilots and the waivers for instructor operators in UAS units are limited. There are no waivers for RL progression or currency. The only two waivers still granted are for hours (200) and rank, and are directly coordinated with the battalion command sergeant major. The Army is trending down on waivers and grant them for fewer reasons, with accident rates also decreasing. There were 56 waivers in FY14, 40 in FY15, and 16 so far in FY16. Waivers are not given lightly.

Due to a recent OSD directed Resource Management Decision to grow additional UAS formations to meet global ISR requirements, the Army is expanding the capabilities of the UAS school to meet increased manning requirements. This has caused a temporary shortage in Gray Eagle UAS operators and maintainers. We are currently on track to close the gap in

FY17. Until then, some of our non-deployed Gray Eagle formations will be manned at lower levels to ensure deployed units are fully manned and trained to meet mission requirements.

Readiness

To measure readiness of the UAS force, the Army implemented multiple initiatives to improve readiness reporting. A recent FORSCOM message directed subordinates to establish UAS flight hour programs and to report monthly UAS flying hour execution to the FORSCOM Commander. The FY16 FORSCOM Training Guidance directed Combat Aviation Brigade Commanders to provide aviation standardization, maintenance, and safety oversight to Shadow Platoons assigned to ground maneuver units. This is to ensure all UAS formations regardless of parent HQs are executing flying hours to sustain readiness and build proficiency. It also directed full execution of the UAS flying hour program to improve Shadow UAS platoon readiness, and to build the experience levels required for IO certification.

HQDA also updated the Defense Readiness Reporting System to better facilitate Army UAS crew readiness reporting to ensure standardization across the Army. These changes will be implemented in the next update to DA PAM 220-1 (Defense Readiness Reporting System – Army Procedures).

As we continue to gather lessons learned, and tactics, techniques, and procedures (TTPs), we are continually assessing manning and home station training through an Army-level holistic UAS review process. This will enable the Army to more rapidly refine TTPs and training as we employ new sensors, weapons, and formations. This review process, coupled with the increased rigor in our readiness and training processes, will maintain our positive trend of reduced accidents and mishaps in recent years.

Conclusion

Over the last 15 years, the US Army has rapidly grown our Unmanned Aircraft System fleet. Army UAS formations are embedded at the tactical-level within Brigade Combat Teams and Combat Aviation Brigades, at the operational level in Divisions, and at the strategic level in INSCOM and Special Operations units. Army UAS formations have played, and will continue to play, a critical role in our ability to maintain overmatch of our adversaries as we face an increasingly complex world. Although this technology has influenced the character of warfare, integration of this technology must always be underpinned by our most important weapons—

highly trained professional Soldiers and leaders able to fully exploit the capabilities that UAS bring to the battlefield.

Thank you for the opportunity to represent our Soldiers and our Army. On behalf of the Army, thank you for your support to our Soldiers, Civilians, Veterans, and their Families.