SPECIAL
PEO AVN UPDATE
FOCUS

AH-64E Apaches take off from the Boeing facility in Mesa, AZ; the AH-64E program is currently scheduled to produce 634 remanufactured airframes and 56 new airframes.

BOEING COURTESY PHOTO

PEO Aviation:

Retaining a Viable Aviation Fleet in a Fiscally Challenged Environment, Now and Into the Future

By MG William T. Crosby

Army Aviation has contributed immeasurably for more than a decade supporting our ground troops and our allies in all theaters of operations. Our aged fleet, our platforms that are between 25 to over 50 years old, have performed beyond expectations in all areas of contingency operations, in Afghanistan, in Iraq and other areas around the world.

The credit for Army Aviation's continued relevance and success in theater has always belonged to our aviators and maintainers who keep our forward-deployed fleet flying five to six times the normal operational tempo with readiness rates that far exceeded our expectations. Credit must also be given to our industry partners for their steadfast support to our Army and who have helped to provide us with the best aviation weapon systems in the world.

But in this era of tightening defense budgets, more than ever, it has become increasingly important to ask ourselves, how do we scope our efforts in the future? What is the balance and what are the trade-offs to ensure that we make sound investments for the future of Army Aviation?

Even in our fiscally austere environment, we must keep in mind that decisions we make today will have an impact on future capabilities and the viability of our aircraft. Short sighted decisions will undermine a strategic view. Our ability to continue to support our ground Soldiers in current and future missions will influence impending acquisition strategies.

It is vital that we continue to invest in science and technology and the development of an aircraft that will eventually replace our aging fleet.

At the same time, we must always be fiscally responsible with our taxpayer dollars and make the right decisions for all our programs, even when it takes more time than we want to do it. We need to allow our senior leaders the time to make those tough decisions. They have to keep the entire Army strategy in mind and the impacts that each decision brings. We may not be able to have those answers as quickly as we want, but we cannot rush to failure.

Stability and our ability to forecast will be key for future success in Army Aviation.

Continuing Modernization Efforts Through Effective Program Management

We in Army acquisition are working diligently to ensure that our Soldiers are always supported as we transition from wartime to peacetime operations. As our senior leaders have stated, the role of Army Aviation may grow as the service expects to operate with fewer Soldiers in future operations, especially in dangerous areas that may be less accessible.

Inserting new technology into our aviation platforms is crucial if we are to keep our aviation assets viable in future operations. Even as we transition from wartime to peacetime, the Army must maintain a stable and reli-

U.S. ARMY PHOTO BY MARK MARCUS, CARGO HELICOPTERS PROJECT OFFICE

The Project Office for Cargo Helicopters personally delivered 12 CH-47F Chinooks in April 2012 to the 1st Battalion, 52nd Aviation Regiment, 16th Combat Aviation Brigade at Fort Wainwright, AK.

able fleet that can respond immediately when called. My team in PEO Aviation, led by the most capable project managers in the Army, is working hard to keep our aviation fleet the best in the world.

The ***Utility Helicopters*** Project Office is beginning an acquisition program to digitize the UH-60L Black Hawk. The effort will enable the existing analog UH-60L aircraft in the fleet to integrate mission data, communicate on the modern battlefield, and maximize pilot vehicle interface with the UH-60M. This effort is scheduled to begin its engineering and manufacturing development phase in late FY 13.

The UH-60L Digital effort will enable the Army to leverage existing assets during a time of fiscal decline while giving Soldiers needed capabilities on the battlefield.

The UH-72A Lakota, also managed by the Utility Helicopters Project Office, made significant strides in 2012, especially with its Security and Support (S&S) Mission Equipment Package (MEP) that supports the Army National Guard (ARNG) in its homeland security missions.

The S&S's sophisticated MEP, which has added an electro-optical/infra-red (EO/IR) sensor, searchlight, data collection with downlink capability to the base UH-72A, has been so successful that the Secretary of Defense has decided to redeploy ARNG assets to the U.S. Southwest Border to aid the Department of Homeland Security.

The CH-47F Improved ***Cargo Helicopter*** program is one of the great acquisition success stories because of the strategic vision laid down for the program early on and the focus on what our Soldiers need. This vision has been diligently executed with strong support from leadership giving the program stability, and the ability to forecast, plan, and execute the program.

As we continue to field and modernize the cargo helicopter fleet, our team is focusing on the long-term strategic capabilities that the CH-47 provides. We are very cognizant of the impacts that interruptions in funding could cause and are working hard to find ways to mitigate those potentialities.

The ***Non-Standard Rotary Wing Aircraft*** Project Office continues to support Russian-made aircraft as well as the MD-500 series, Huey II, UH-1 and AW-139 helicopters. With the recurring success of NSRWA managed acquisition programs, our non-standard rotary wing aircraft portfolio continues to expand in scope.

The NSRWA team is actively engaged in case development and implementation with efforts for Lebanon, Egypt, Afghanistan, Pakistan and Saudi Arabia, to name a few. The NSRWA team strives to maintain the premier aviation support enterprise that provides proactive, timely and consistent programmatic support to the Soldier and our partner nations.

Key Army Aviation assets, such as the ***OH-58D Kiowa Warrior*** are heavily utilized, typically maintaining the highest in-theater OPTEMPO of any

U.S. ARMY PHOTO BY 1LT HENRY CHAN, 16TH CSSB PUBLIC AFFAIRS

An OH-58D Kiowa Warrior helicopter departs Bagram Airfield, Afghanistan for a mission.

Army Aviation asset. Today the average OH-58D KW airframe is over 40 years old. Most of the MEP dates back to the late 1980s.

The Cockpit and Sensor Upgrade (CASUP) modernizes the OH-58D into the OH-58F configuration by upgrading the sensor, cockpit software and hardware, aircraft survivability equipment, communication/navigation systems, emergency systems, and the weapons suite. The OH-58F/CASUP isn't developing costly new technology; it upgrades by integrating mature technologies from other military aviation platforms.

The Army is acting as the system integrator (SI), a role normally as-

U.S. ARMY PHOTO BY LAWRENCE "MARTY" SHELTON, UAS PROJECT OFFICE

An MQ-1C Gray Eagle undergoes hardware-in-the-loop testing at the Software Engineering Directorate lab on Redstone Arsenal, AL. The simulated lab tests conducted prior to flight testing have proven very effective in fielding new technologies on the Gray Eagle.

sumed by industry, and a first in Army aircraft modification. With the Army as SI, the taxpayers save $37M during development and over $551M during production. The Army accepted delivery of the first OH-58F prototype aircraft in October 2012. First flight is scheduled for April 2013, and the first unit equipped (FUE) is planned for 2016.

Meanwhile, our senior leaders are contemplating a decision on the future of ***Armed Aerial Scout***. We in Army Aviation are looking at this from the perspective of the entire aviation portfolio and the impacts to other aviation programs. Our senior leaders are looking at this with the entire Army strategy in mind.

As stated earlier, we have to allow our senior leaders the time to make the hard decisions in order to make the right one. No matter what the decision, I can tell you that everyone in the Army is looking at this with the Soldier in mind. Our course of action will not deviate from it.

The ***Apache*** Project Office, which gave a new "nickname" in January for the AH-64E Apache (now called the AH-64E Apache Guardian), is continuously in a state of "evolution" as the project office works to equip the first unit with the E model.

The project office was approved for full rate production (FRP) of the AH-64Es in August 2012 for the remainder of the production through 2027.

Plans and development for technological insertions are ongoing with Lot 4 configurations to consist of joint interoperability enhancements.

A similar process is planned for Lot 6 with initial delivery in January 2017 and will include among the upgrades, a multi-core mission processor that will mitigate obsolescence. The Modernized Dayside Sensor Assembly development effort is one of the major obsolescence programs in place today within the project office.

The ***Aviation Systems*** Project Office recently completed the Network Integrated Evaluation (NIE) 13.1 and is already deep in planning and preparing for 13.2. Their input into the NIEs has been very beneficial in helping the Army to better synchronize requirement efforts and develop and test systems in order to better define emerging technologies.

PM AS is also our lead in the government's participation in the Future Airborne Capability Environment (FACE) consortium, a government-industry forum established as a business model that will enable the development of software components that interact with other software components through open-non-proprietary interfaces.

The Project Office is deep in the ground work and development efforts to combat degraded visual environment (DVE) situations in which helicopter pilots experience brownout or whiteout conditions.

The PM is evaluating a number of DVE solutions such as the Helicopter Autonomous Landing System, a 94 GHz radar that can see through smoke, fog, dust, and sand and is fused with DoD digital terrain maps and presented on cockpit displays with advanced symbology.

Having celebrated its one year anniversary since becoming a project office, ***PM Fixed Wing*** has steadily picked up momentum in working to consolidate all of the Army's fixed wing assets under the life cycle management of one office.

They have grown from managing 256 aircraft and six sustainment contracts to over 360 aircraft and 38 sustainment contracts in the past year.

Many of the newer programs that the PM manages were developed from quick reaction capability aircraft designed to support mission-specific Iraq and Afghanistan requirements.

The Army is now reviewing the capabilities of these platforms to determine whether or not they support enduring missions. At the same time, in support of the Army's 2020 vision, the legacy RC-12 Guardrail fleet is being replaced with the Enhanced Medium Altitude Reconnaissance Surveillance System (EMARSS).

The aging utility fleet (C-12, C-26, and UC-35) is scheduled to be replaced with a new fixed wing utility aircraft, which is pending a milestone decision document. Recently, the PM accepted delivery of the first three replacement UV-18C airplanes destined for the U.S. Army Golden Knights and are now in the process of modifying these aircraft to specifically support parachute operations.

Lastly, the Project Office for ***Unmanned Aircraft Systems*** (UAS) continues its expansion of roles and responsibilities born out of necessity from the combat commanders and aviation units that have seen increasing significance and success of having the "hunting dog in front of the hunter." Manned-unmanned teaming (MUMT) and unmanned-unmanned teaming will be even more important in future operations.

Our AH-64E Apache helicopters are now capable of Level of Interoperability (LOI) 4 where pilots are able to control the flight path and payload of the MQ-1C Gray Eagle. This was successfully demonstrated during the initial operational test of the Block III and Gray Eagle aircraft.

Our Kiowa Warriors are capable of LOI 2, enabling pilots to receive UAS video and other sensor information directly into their cockpit. The first Gray Eagle company, F/227th Avn. from Fort Hood, TX as well as the Shadow platoon from the 101st CAB, were deployed in 2012, and we've already seen unprecedented success in MUMT within those two units.

We've only just begun pushing the envelope in MUMT operations,

and we will continue to discover new tactics, techniques, and procedures (TTPs) that will shape the way we conduct future aviation operations.

The Need for a Stable and Viable Fleet

Modernization efforts, sustainment of our aged fleet, and the development of a future vertical lift (FVL) continues to be a top priority in Army Aviation amidst our current reduced budget environment.

We must continue to develop FVL options that can fly faster, farther, carry more payload and overall have significantly increased capability than anything we currently have in the inventory. Army Aviation will always be a critical partner in the Army's operating environment.

We need to have an appetite suppressant, but at the same time, we've got to focus on a balanced approach and get the best return on investment for our taxpayer dollars.

We must continue to expand collaboration between science and technology and military program management.

We can ill-afford to pursue capabilities that do not support either FVL or modernize our current platforms.

Collaboration, coordination, and communication are more important than ever, and we must ensure that we accomplish them, which may mean finding new ways to do it.

We need to be prepared and accept the tough decisions and trades we will face in order to keep us resourced, but we need to do that proactively so that we and our senior leaders can make informed decisions. We are going to have to take the best solution we can with the best potential for success.

Our industry is constantly striving to meet the needs and the demands of our Army. We can ill-afford to duplicate our energy and resources, but we must be cautious not to kill competition either.

It is critically important that we all stay tied together as we look at the technologies that we're pursuing, and that we keep each other informed.

Let us look at all the options that are out there and make the best investment for our future.

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MG William T. Crosby is the Program Executive Officer, Aviation at Redstone Arsenal, AL.

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