

NOT FOR PUBLICATION UNTIL RELEASED BY THE  
HOUSE ARMED SERVICES COMMITTEE  
AIR AND LAND FORCES AND SEAPOWER AND  
EXPEDITIONARY FORCES SUBCOMMITTEES

STATEMENT OF

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BEFORE THE

AIR AND LAND FORCES

AND

SEAPOWER AND EXPEDITIONARY FORCES

SUBCOMMITTEES

OF THE

HOUSE ARMED SERVICES COMMITTEE

ON

FISCAL YEAR 2008 NAVY/MARINE CORPS TACAIR PROGRAMS

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Chairman Taylor, Chairman Abercrombie, Congressman Bartlett, Congressman Saxton distinguished members of the Subcommittees, thank you for the opportunity to appear before you to discuss Marine Corps Aviation. Today, over 30 percent of Marine Aviation is deployed overseas afloat and ashore. This past year we have flown over eighty thousand combat hours in both rotary and fixed wing aircraft. This significant achievement is due to the tireless efforts of our Aviation Marines and the consistent support of Marine Aviation by this Subcommittee. Thank you for your dedication and oversight.

The primary focus of Marine Aviation is Grunt Based Operations or “GBO”. In the same tradition of Marine aviators that flew over Guadalcanal in World War II and the skies of Korea providing support to Marine and Army infantry units, your Marine Corps is adding to its rich tradition of providing the best aviation support to the infantryman available in the world today. To that end, Marine Aviation has three priorities that guide all of our actions: Sustain the Current Fight, Modernize the Force, and Prepare for the Long War. Execution of any one of these priorities is a formidable challenge. Today, we are executing all three concurrently in order to win the battle while preserving our current warfighting capabilities to ensure we are ready to answer the call of operational commitments. Our goal is not only to preserve but also to expand upon our expeditionary nature so that when called, Marine Aviation can quickly and effectively defend our critical national interests. There is no greater calling and Marine Aviation will always remain “On Call in a Dangerous World”.

### Sustain the Current Fight

The Fiscal Year (FY) 2008 President’s Budget request balances sustainment of legacy aircraft that are performing magnificently in current operations with continued recapitalization for new capabilities and reduced operating costs. USMC Aviation is focused on a capabilities-based approach to provide the Marine Air Ground Task Force (MAGTF) and Joint Force with agility and the ability to conduct full spectrum combat operations.

## **RESET**

The Corps' Reset Combat Sustainment in Theater Program in the past 12 months has repaired over 7,000 aircraft discrepancies and provided the Marine Corps over 126,000 direct maintenance man hours. In CONUS, the Reset Program has funded approximately 1 million direct maintenance man hours. Funding of the Reset Program has allowed this maintenance to be completed, which normally would have been deferred. Additionally, the Reset program in FY 2006 and 2007 has supported depot repair of over 250 Marine aircraft and is intended to support depot repair of approximately 170 aircraft in FY 2008.

## **Aircraft Survivability Equipment (ASE)**

The Marine Corps has lost 7 aircraft to direct enemy action in combat operations since 9/11. We continue to mitigate threats to rotary wing aviation in GWOT theaters through a combination of tactics, centralized command and control, and upgraded Aircraft Survivability Equipment (ASE). To prevent current technology lagging behind the threat, increased DoD Science and Technology (S&T) community focus and funding on developing the next generation helicopter survivability equipment are required to counter emerging threats such as advanced technology Man-Portable Air Defense Systems (MANPADS), and to operate in degraded visibility environments. Marine Aviation has invested \$390M on rotary wing ASE development and procurement from 2000 through 2007. We have additionally requested \$66.4M in the FY 2007 Supplemental budgets for continued RDT&E and procurement of the latest available ASE technology for our helicopters. For FY 2008 the Department of the Navy has requested \$29.7M for continued Directed Infrared Countermeasures (DIRCM) development, a state of the art ASE system that will enable Marine Aviation to pace the threat of advanced anti-aircraft systems proliferation. Your continued support of this critical need for our fleet of aircraft is greatly appreciated as we ensure our pilots and aircrew have the most current survivability technology available to them.

## **AVIATION TRAINING SYSTEMS**

The mission of Aviation Training Systems (ATS) is to plan, execute, and manage Marine Aviation training to achieve individual and unit combat readiness through standardized training across all aviation core competencies. Marine Aviation, through ATS, is pursuing the development of fully integrated training systems for both new and legacy aircraft to greatly enhance operational readiness, to improve safety through greater standardization, and to significantly reduce the life cycle cost of maintaining and sustaining aircraft. ATS will integrate all post-accession Officer and Enlisted training, operational safety programs, and standardize our training curriculums, simulation devices, and evaluation processes through three core elements. These include: training device configuration and standardization; Systems Approach to Training derived curriculum; Standardization and Evaluation of Flight Leadership, Instrument and Naval Air Training and Operating Procedures Standardization (NATOPS) programs, and standardized operating procedures among like units. We have learned valuable lessons from industry as well as the MV-22 and KC-130J programs on how to best accomplish this initiative. Our way forward includes the stand-up of the Marine Aviation Training Systems Squadron (MATSS) sites located at each Marine Corps Air Station (MCAS) beginning this fall. Currently, there is one functional MATSS site located onboard MCAS New River, NC. MATSS New River has been highly successful with its responsive management of training systems for our tilt-rotor and rotary wing assets.

## **AV-8B**

The FY 2008 Budget requests \$17.4M RDT&E funds to support development of the Engine Life Management Plan (ELMP)/Accelerated Simulated Mission Endurance Testing, Tactical Moving Map Display, the Readiness Management Plan (RMP), and moving the LITENING targeting pod to the centerline station. This effort will increase the ordnance carriage capability of the Harrier to better support combat operations. The FY 2008 Budget also requests \$40.5M procurement funding for procurement of Open Systems Core Avionics Requirement, TAV-8B Upgrade, ELMP upgrades, and the RMP, which addresses aircraft obsolescence and deficiency issues associated with sustaining the current AV-8B fleet. The AV-8B program is additionally transitioning to a Fatigue

Life Experienced Analysis (FLEA) program to more accurately track the useful life remaining on our legacy fleet. This program will commence in FY 2009 and will help to manage our legacy inventory of AV-8Bs until transition to the F-35B.

### **F/A-18 A+/C/D**

The FY 2008 Budget request contains \$73.6M for the continuation of the systems upgrade programs for legacy F/A-18 platforms. Included in this request is the continued procurement of recently fielded systems such as Joint Helmet Mounted Cueing System, Multi-Function Information Distribution System, and Digital Communications System. The Marine Corps continues to upgrade 56 Lot 7-9 F/A-18A to Lot 17 F/A-18C aircraft capability with digital communications and tactical data link. The Marine Corps is upgrading the current capabilities of the F/A-18C/D with digital communications, tactical data link and tactical reconnaissance systems. This upgrade ensures that our F/A-18s remain viable and relevant in support of Department of the Navy (DoN) Tactical Air Integration and supports our Expeditionary Maneuver Warfare concept. We are also employing the LITENING targeting pod on the F/A-18A+/C/D aircraft in OIF. When combined with data link hardware and the Rover Ground Station, the LITENING pod provides real time video to ground forces engaged with the enemy, adding a new dimension to precision fires and Intelligence, Surveillance, and Reconnaissance (ISR). Our fleet of legacy F/A-18D's is currently flying at four times their programmed rate. The FY 2008 Budget also requests \$112M allowing for procurement of Center Barrel Replacements to extend the service life of F/A-18A+/C/Ds seven years to meet fleet inventory requirements until 2022. This initiative is critical to ensure we have adequate numbers of F/A-18's to meet National Military Strategy requirements until we transition to the F-35B.

### **EA-6B AND FUTURE MAGTF ELECTRONIC WARFARE**

The Marine Corps remains fully committed to flying the EA-6B Prowler through at least 2015 as we look to enhance our legacy capabilities and posture for our future MAGTF Electronic Warfare Network. The FY 2007 Supplemental Budget requests \$113.5M for RDT&E and procurement for continuing EA-6B upgrades and readiness

improvements, which increase the operational availability of this low density high demand aircraft and reduce operating costs. These requests include \$97.7M for purchase and installation of 7 Improved Capability (ICAP) III aircraft systems for USMC EA-6Bs. Also included in our \$113.5M request are Multifunction Information Distribution System (MIDS) kits, which will provide dramatically improved emitter identification and location information, Link-16 connectivity for shared situational awareness, as well as Blue Force Tracker capability. We are also conducting close coordination with the Air Force to leverage joint development of the Next Generation Jammer, The Digital Radio Frequency Memory (DRFM) program, and the Adapted Joint C4ISR Node (AJCN) program.

Beyond the Prowler, the Future Electronic Warfare Network for the Marine Corps will comprise a “system of systems”. The constituent components of this network include; the F-35B Joint Strike Fighter, with its embedded array of electronic warfare capabilities; Unmanned Aerial Systems (UAS) capable of carrying scalable and specifically tailored electronic warfare suites; ISR payloads, and ground systems already fielded and under development. This system will possess both offensive and defensive capabilities. A key tenet of our future vision is an array of electronic warfare *capabilities*, not just a single electronic warfare *platform*. The individual pieces of hardware used to conduct future electronic warfare will comprise the tentacles of the distributed network. This network will serve as the backbone for our electronic warfare capability. This is a critical and important distinction for the Corps and is what will make future USMC electronic warfare capabilities so useful to the MAGTF and the Department of Defense.

## **WEAPONS PROGRAMS**

Since 2003, Marine TACAIR have employed 691 Joint Direct Attack Munitions (JDAMs), 2,710 Guided Bomb Units, and 268 Maverick missiles during combat operations. The FY 2008 Budget supports precision-guided munition (PGM) programs that continue to support combat operations.

### **Dual-Mode Direct Attack Weapons**

Based on an Urgent Needs Statement and feedback from the Combatant Commanders in Iraq and Afghanistan, the DoN determined that improved responsiveness and flexibility was required for close air support (CAS) missions in support of Marine and Army ground forces. To address these shortcomings, the Department leveraged congressionally directed funding in the research of dual-mode laser-guided weapons and successfully developed and integrated Global Positioning System and laser guided technologies into a single direct-attack weapon. This capability will be fielded on Marine Corps F/A-18A+/C/D and AV-8B aircraft this summer to reduce the number of sorties needed to destroy intended targets, while providing the warfighter with increased flexibility in adverse weather against all classes of targets. 7000 Dual Mode Direct Attack Weapons were procured and will be delivered by the end of FY 2008. The laser-guided direct attack technology is being extended to include moving targets and will be available in FY 2008. The FY 2008 Budget requests \$29M to develop the Direct Attack Moving Target Capability (DMTC). In January, testing was completed on a Low Collateral Damage Bomb (LCDB), in response to a CENTCOM requirement for our legacy aircraft. The LCDB can be used with existing Direct Attack Laser Guided Bomb (DMLGB) or JDAM kits and will be available to our warfighters before June.

### **Joint Air to Ground Missile (JAGM) (Formerly Joint Common Missile (JCM))**

The Marine Corps has expended 1,155 Hellfire and 991 TOW air-to-ground missiles in support of ground forces engaged in combat since 2003. A JROC Memorandum called for a RDT&E effort, beginning in FY 2007, to mitigate JROC-validated capability gaps in precision munitions by developing the next generation Air-to-Ground CAS weapon for fixed-wing, rotary-wing, and UAV aircraft. The Marine Corps is participating, with the Joint Staff, in an OSD led Concept Decision Review. The Concept Decision Review will obtain a Tri-Chair strategic investment decision on JAGM in the first half of this calendar year. A low collateral damage PGM for moving targets is critical for Marine Aviation as a replacement for our aging stockpiles of TOW, Hellfire and Laser Maverick family of weapons. The Services have put \$68.5M in the FY 08 budget for JAGM risk reduction and seeker technology RDT&E.

### Modernize the Force

## **F-35B**

The F-35B Short Takeoff and Vertical Landing (STOVL) Joint Strike Fighter (JSF) is critical for attaining our vision of an all-STOVL fleet within the Marine Corps. The FY 2008 Budget request contains \$2.0B for continuation of System Development and Demonstration (SDD) on the JSF and \$764M for six aircraft. Another major program milestone was reached in December of last year when the first Conventional Takeoff and Landing (CTOL) variant completed its maiden flight. The Marine Corps must maintain a 2012 F-35B IOC as we manage our aging AV-8B and F/A-18 aircraft inventories in order to maintain our capability as the most mobile and flexible combat multiplier to the Marine Air Ground Task Force. The mature, thoughtful design of the F-35B and technological advances to replace many individual stovepipe capabilities into a single platform will provide the Marine Corps with a highly advanced, persistent, and enduring tactical aircraft for the next 50 years; the F-35B will act as an integrated flying combat system in support of our ground forces and will aid in providing full spectrum dominance of the battle space. The Short Takeoff / Vertical Landing (STOVL) capability of the F-35B will also ensure we maintain the flexible basing options that our legacy AV-8B Harrier jump jets so ably demonstrated during the march to Baghdad during OIF I. The Marine Corps has expressed our requirements for the F-35B in the Operational Requirements Document originally signed on 13 March 2000. We are managing our current strike fighter shortfall through reinvestment of existing squadrons in the rest of our fleet. If Initial Operational Capability (IOC) of the F-35B is deferred past 2012 and the procurement ramp rate is shallowed out, the Marine Corps will be unable to fill its future operational commitments.

## **V-22 Osprey**

The FY 2008 budget requests \$2B of procurement funding for 21 MV-22s, associated spares, aircraft retrofit, and Economic Ordering Quantity investments supporting FY 2008 - 2013 multi-year procurement, and \$118M of RDT&E for continued development, testing and evaluation. The V-22 Program will deliver a total of 13 aircraft in FY 2008. Recent contractor performance has met expectations with on time deliveries of block B aircraft and timely contractor support.



To date, 29 Block A and 15 Block B aircraft have been delivered to support developmental testing, Operational Evaluation (OPEVAL), training and initial fleet fielding. The MV-22 completed OPEVAL in 2005 and fielding is underway at MCAS New River, North Carolina. Three squadrons have commenced the transition from the 40 year-old CH-46E to Block B MV-22Bs. The first of these two squadrons will provide an IOC in FY 2007. In full rate production, the aircraft procurement rate will ramp up to 30 aircraft per year. The program of record includes 360 MV-22s for the Marine Corps.

The demands of GWOT and modernization of our Expeditionary Warfare capabilities have increased the urgency to rapidly field the MV-22 Osprey. Its design incorporates advanced technologies in composite materials, survivability, airfoil design, fly-by-wire controls, digital avionics and manufacturing. The MV-22 is capable of carrying 24 combat-equipped Marines or a 10,000-pound external load, and has a strategic self-deployment capability of 2,100 nautical miles with a single aerial refueling. It is vastly superior to the CH-46E it replaces, with twice the speed, three times the payload, five times the range, and six times the survivability. The V-22 Osprey is a joint platform for the Navy, Marine Corps, and Air Force. It is providing significant opportunities for joint training, tactics development, and mission execution.

We expect our first combat deployment of the MV-22 will occur this fall.

### **KC-130J**

The Marine Corps KC-130J is the work horse of Marine Aviation in OIF. Six aircraft have been continuously deployed in support of OIF since IOC and have provided the warfighter state of the art, multi-mission, tactical aerial refueling, and fixed wing assault support assets that have exceeded expectations. This year's deployment of the in-flight refueling capable MV-22 significantly increases the tanking requirement of the KC-130J community. The FY 2008 Budget requests \$270M for procurement of four aircraft, associated spares, and advanced procurement. The Marine Corps is currently in a multi-year procurement program with the Air Force to procure a total of 35 aircraft by the end of FY 2008. The program calls for the continued procurement of 2 aircraft per year.

## **Unmanned Aircraft Systems (UAS)**

Marine Aviation has the lead for Tier III of the USMC UAS Family of Systems that is designed primarily to support a MEF or Joint Task Force-level commander. The Pioneer UAS has served us well since 1986 in this role; it has proven its worth in the fight against insurgent forces and terrorists in Iraq. However, due to the Pioneer's age and obsolescence, it has become a logistical challenge for our operational forces. Based on these challenges, the Marine Corps decided it will begin to transition to the Army Shadow UAS during the fourth quarter of FY 2007. The Shadow's capabilities are similar to the Pioneer and have been upgraded over the past few years. It will provide commanders with a day/night ISR and target acquisition capability. This year's Presidential Budget contains a request for \$90.3M for procurement for five of 13 required Shadow systems. We envision the Shadow serving as an interim system until a Vertical UAS (VUAS) is developed and fielded in the 2015 timeframe.

The VUAS will provide a capability that can be either land or sea-based. It will provide the future MAGTF with organic, responsive and real-time ISR as well as electronic attack, fires, and command and control capabilities, operating in concert with all MAGTF assets.

## **CH-53K Program**

Marine Corps CH-53E legacy helicopters continue to make significant contributions in the Horn of Africa and Iraq. Vertical heavy-lift capability will continue to be critical to successful global operations in future anti-access, area-denial environments, enabling the joint concepts of Force Application and Focused Logistics within *The Capstone Concept for Joint Operations*. The FY 2008 Budget requests \$417M of RDT&E funds to support development of the CH-53K helicopter that will replace the current U.S. Marine Corps' heavy-lift aviation platform, the venerable but aging CH-53E Super Stallion.

The CH-53E, first fielded in 1981, continues to demonstrate its strategic value as a fully maritized, expeditionary, heavy-lift platform. But the CH-53E is reaching service-life and performance limits as the GWOT drives operations from sea level to higher altitudes and into hostile environments and austere operating sites. The CH-53E

cannot support our future operational concepts of Sea Basing and Ship to Objective Maneuver (STOM). To keep Fleet Marine Forces operationally effective well into the future, the Marine Corps is developing the CH-53K, a near-term and cost-effective replacement for the CH-53E that remains within the CH-53E shipboard footprint, and avoids L-class ship alteration or new ship construction costs. Addressing lessons learned from recent operations, the new-build CH-53K helicopter will be capable of externally lifting 27,000 pounds on a Sea-Level Hot day (103 degrees Fahrenheit (F)) to an unrefueled range of 110 Nautical Miles (NM). This capability is more than double the current CH-53E envelope under the same conditions. Additionally, CH-53K helicopters will each be capable of routinely carrying 30 combat-loaded troops. Major systems improvements which will significantly reduce Operations and Support (O&S) costs include: interoperable avionics, improved cargo-handling systems, and expanded survivability and force protection capabilities.

A Service Life Assessment completed in 1999 identified a CH-53E fatigue life limit of 6,120 airframe hours, which a significant number of CH-53E platforms will attain by FY 2011. While the Marine Corps is also seeking short-term solutions to diminish the effects of this and other CH-53E issues in the FY 2007 budget, these solutions will not arrest accelerating attrition, continuing escalation of O&S costs, and the ever-increasing maintenance burden on an aircraft that is 24 years old. In addition, due to the abnormally high GWOT operational tempo, the CH-53E fleet is expending service life at a much faster rate than planned.

Requirements for the CH-53K were developed in consonance with STOM concepts from Expeditionary Maneuver Warfare in *Marine Corps Strategy 21*, the Naval concept of Sea Basing in *Sea Power 21*, and with lessons learned from recent operational experience. The Joint Requirements Oversight Council (JROC) approved the Operational Requirements Document that defines the necessary CH-53K capabilities in December 2004. We intend to achieve IOC with the CH-53K, a heavy-lift helicopter with vastly enhanced performance capability, survivability and reliability, in 2015. The CH-53K will be the most capable, marinized, heavy-lift helicopter in the world, a truly transformational asset.

## **H-1 Upgrades Program**

The light utility and attack helicopter community plays a critical role supporting Marines on the ground. To ensure continued support to the MAGTF our H-1 aircraft are in need of modernization. The UH-1N, for example, has not received any major modifications to its rotor and drive train systems since its delivery to the Marine Corps in 1971. This situation has led to a decline in the aircraft's power available since its introduction. Reduced power margins in the Huey have decreased safety margins for our pilots and aircrew. Our AH-1W attack helicopters have been performing magnificently in combat operations. In order to maintain this high level of performance we need to upgrade the "W" to streamline pilot workload, increase ordnance carriage, and improve sensor capabilities.

The H-1 Upgrades Program will replace the Marine Corps' AH-1W and UH-1N helicopters with state-of-the-art AH-1Z and UH-1Y models. The program is a key modernization effort designed to improve upon existing capabilities, enhance operational effectiveness, and extend the service life of both aircraft. The UH-1Y, for example, expands utility mission capabilities with its improvements in range, speed, endurance, and useful payload. Additionally, the commonality gained between the AH-1Z and UH-1Y (84 percent) will significantly reduce life-cycle costs and logistical footprint, while increasing the maintainability and deployability of both aircraft.

The H-1 Upgrades Program, through a combination of remanufacture and build new, will upgrade our current legacy fleet to 100 UH-1Ys and 180 AH-1Zs. The Defense Acquisition Board will convene in May 2007 to authorize a program restructure, approve a fourth LRIP lot, and lay the foundation to "grow the force" in support of plans for a balanced 202K Marine Corps.

The FY 2008 Budget requests \$580M APN funds to procure 20 (15 UH-1Ys and 5 AH-1Zs) aircraft and spares and \$3.6M RDT&E funds to complete the H-1 Upgrades Engineering and Manufacturing Development (EMD) phase. Production continues on the first three LRIP lots, awarded to Bell Helicopter. To date, two aircraft (one UH-1Y and one AH-1Z) have been delivered to the Marines. One additional UH-1Y will be delivered by the end of this month. The program completed OPEVAL Phase I successfully in November 06, and will enter Phase II later this year.

The program continues to seek opportunities to reduce unit cost and minimize the impact on current and future operational readiness. In support of maintaining readiness, the optimum mix of remanufactured and newly fabricated aircraft is currently being evaluated; the results will be reflected in future budget requests. We are encouraged by recent steps Bell has taken to arrest recent cost growth to include leadership change and program quality assurance measures. Bell Helicopter needs to continue to meet scheduled aircraft deliveries to ensure we have the best attack and utility helicopters available to our Corps as well as phase out our legacy inventory.

### Prepare for the Long War

#### **NAVAL AVIATION ENTERPRISE (NAE)**

Marine Aviation's current readiness process is sub-optimized to link and relate the various elements of readiness in a way that enables us to accurately define requirements. Therefore, Marine Aviation is integrating into the NAE and Naval Aviation Readiness Integrated Improvement Program (NAVRIIP) to achieve optimal readiness now, but also to sustain the health of Marine Aviation into the future. The integration strategy has three main phases and stages, and the goals of the integration are: increase in-reporting rates; decrease out-of-reporting rates; improve Depot turn-around times; reduce direct maintenance man hours per flight hour; reduce flight hour costs; extend airframe service life for legacy platforms; achieve programmed service life for new platforms; and increase the core competency of organizational and intermediate-level maintenance departments.

#### **AVIATION SAFETY**

The Marine Corps is committed to the continued reduction of our aviation safety mishap rate. We do not accept the loss of Marines or aircraft during any type of flight operations, particularly during training. In FY 2005, the Commandant of the Marine

Corps directed 21 operational safety initiatives to address day-to-day flight and ground operations. We continue to look for new and innovative measures to reduce our aviation mishap rate. We feel confident that our most recent internal initiative, ATS, will continue to arrest our mishap rate as we strive to reach the Secretary of Defense goal of 50% mishap reduction. The Marine Corps FY 2006 Class A flight mishap rate was 1.58 per 100,000 flight hours, a drop from 2.26 and 5.17 from the previous 2 years.

## **SUMMARY**

The Marine Corps has a heritage of fighting battles and winning wars on the sea, on the ground, and in the air. We do so while supporting routine deployment cycles and transforming the force. Today is no different. My pride in the accomplishments of Marine Aviation past and present is only exceeded by my confidence that we are poised to meet our future challenges. Our focus remains on the lance corporal and ensuring that when he calls for Marine Air, we are there. Thank you for your consideration.