

NOT FOR PUBLICATION UNTIL RELEASED BY
THE SENATE ARMED SERVICES COMMITTEE
AIRLAND SUBCOMMITTEE

STATEMENT OF

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AND

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DIRECTOR, AIR WARFARE

BEFORE THE

AIRLAND SUBCOMMITTEE

OF THE

SENATE ARMED SERVICES COMMITTEE

ON

FISCAL YEAR 2009 NAVY/MARINE CORPS TACAIR PROGRAMS

APRIL 9, 2008

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Mr. Chairman and distinguished members of the Subcommittee, thank you for providing us with this opportunity to appear before you to discuss the Department of the Navy's Fiscal Year 2009 tactical aviation programs.

AVIATION PROGRAMS SUMMARY/OVERVIEW:

The Fiscal Year 2009 President's Budget request implements a recapitalization strategy to obtain new capabilities - and initiatives to reduce operating costs while sustaining legacy fleet aircraft that are performing magnificently in current operations. We continue to work with industry in seeking ways to reduce costs via multi-year procurement (MYP) contracting strategies on the F/A-18 E/F airframe, H-60S/R, and the V-22; and we will implement a 'prototype' strategy on the Joint Air-to-Ground Missile (JAGM) to ensure high technology readiness and reduced risk prior to entering System Development and Demonstration (SDD). The Fiscal Year 2009 Budget plan ensures that the Navy and Marine Corps maintain a joint force able to meet the spectrum of threats. Our proposal continues the development of the F-35, the E-2D Advanced Hawkeye, EA-18G, the VH-71 Presidential Helicopter Replacement Aircraft, the CH-53K Heavy Lift Replacement aircraft, Unmanned Aviation, and new strike weapons capabilities. In total, Navy/Marine Corps aviation will procure 134 additional tactical and fixed-wing aircraft, 69 rotary-wing aircraft and three VTUAV's for a total of 206 aircraft.

I. TACTICAL AIRCRAFT/TACTICAL AIRCRAFT SYSTEMS

F-35 Joint Strike Fighter (JSF)

The Fiscal Year 2009 Budget requests \$1.5 billion RDT&E,N for continuation of F-35 System Development and Demonstration (SDD) and \$1.98 billion APN for the Low Rate Initial Production lot three (LRIP 3) for eight Short Takeoff and Vertical Landing (STOVL) aircraft and the long lead requirements for 14 STOVL and four CV aircraft as part of LRIP 4.

A 5th generation aircraft, the F-35 will enhance precision strike capability with unprecedented stealth, range, sensor fusion, improved radar performance, combat identification and electronic attack capabilities compared to legacy platforms. The F-35 carrier variant (CV) complements the F/A-18E/F Block II and EA-18G in providing long-range strike capability and much improved persistence over the battlefield. The STOVL combines the multi-role versatility of the legacy F/A-18 and the basing flexibility of the AV-8B. The commonality designed into the F-35 program will minimize acquisition and operating costs of Navy and Marine Corps tactical aircraft, and allow enhanced interoperability with our sister Service and Allies.

Impressive technical progress continues across the development program. The SDD jets are taking longer to build than anticipated but setting new standards for quality, and

manufacturing efficiencies improve with each jet. In flight testing, the initial Conventional Takeoff and Landing (CTOL) aircraft (AA-1) continues to demonstrate superb performance and reduce program risk, with 31 sorties flown through mid-February 2008. In addition, the flying avionics test bed has flown 91 hours and has accomplished significant risk reduction on the avionics systems. The first STOVL variant (BF-1) roll-out occurred on-time in December 2007 and STOVL First Flight is currently projected for 4th quarter FY 2008. Manufacture and assembly of all remaining flight test aircraft is well underway. LRIP 1 contract for two Conventional Take Off and Landing (CTOL) aircraft awarded in 2007, as was the LRIP II Long Lead contract for six CTOL's and six STOVL's. STOVL first flight is a key event for award later this year of STOVL Fiscal Year 2008 LRIP 2 Full Funding and LRIP 3 Long Lead Funding. The CV Air System Critical Design Review was successfully completed June 2007 and CV first flight is scheduled for 2009. The STOVL and CV variants are projected to meet their respective Key Performance Parameters.

The F135 engine development has completed 9000+ test hours on 12 engines through mid-February 2008. F135 engine test failures in August and February occurred in nearly identical operating modes. Both Pratt and Whitney and the F-35 Program Office understand the causes of these failures and are actively developing a mitigation plan to minimize the schedule impacts to the program.

The DON supports the omission of continued funding for the alternate engine (F136) in the President's Budget request. The DON maintains there are higher priority needs in the budget and that the risks associated with a single engine supplier continue to be manageable. The three Fiscal Year 2007 Congressionally-directed engine studies have been completed. The conclusions, while supportive of competition in general, reinforced the Department's initial findings that the projected savings from not doing competition outweigh the investment and sustainment costs.

F/A-18 E/F Super Hornet

The Fiscal Year 2009 Budget requests \$1.9 billion in APN for 23 F/A-18 E/F Block II aircraft for the final year of the five-year MYP contract (Fiscal Year 2005 to 2009). The F/A-18E/F continues to transition into the fleet, improving the survivability and strike capability of the carrier air wing. The Super Hornet provides a 40 percent increase in combat radius, 50 percent increase in endurance, and 25 percent increase in weapons payload over our older legacy Hornets. Over 410 F/A-18E/Fs will have been procured through Fiscal Year 2008 which is on track to complete procurement of the program of record of 493 aircraft by 2012. The Super Hornet has used a spiral development approach to incorporate new technologies, such as the Joint Helmet Mounted Cueing System, Advanced Targeting Forward Looking Infra-Red (FLIR), Shared Reconnaissance Pod System, and Multifunctional Information Distribution System data link. The Active Electronically Scanned Array (AESA) radar system in our Block II aircraft has completed operational testing and the full rate production decision was approved in June 2007. The

first two tactical AESA-equipped F/A-18F squadrons have now received all twelve of their allotted aircraft with full Integrated Logistics Support support. The FA-18E/F Fiscal Year 2009 Budget request also includes \$129.3 million to implement commonality, maintain capabilities, and improve reliability and structural safety.

F/A-18 A/B/C/D Legacy Hornet

The Fiscal Year 2009 Budget requests \$321.6 million for the continuation of the systems upgrade programs for the F/A-18 platform. As the F/A-18 program transitions to the F/A-18E/F, the existing inventory of over 648 F/A-18A/B/C/Ds (as of February 2008) will continue to comprise half of the Carrier Strike Group until 2012. Included in this request is the continued procurement of recently fielded systems such as the Joint Helmet Mounted Cueing System, Advanced Targeting FLIR, Multi-Function Information Distribution System, and a Digital Communications System. The Marine Corps continues to upgrade 61 Lot 7-9 F/A-18A models to a Lot 21 F/A-18C avionics aircraft capability with digital communications and a tactical data link. The Marine Corps anticipates programmed upgrades to enhance 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 Tactical Air Integration and Expeditionary Maneuver Warfare. The Marines expect the F/A-18 to remain in the active inventory until 2023. The Marines are also employing the LITENING targeting pod on the F/A-18A+/C/D aircraft in expeditionary operations, to include Operation Iraqi Freedom (OIF). When combined with data link hardware, the LITENING pod provides real time video to ground forces engaged with the enemy through Remotely Operated Video Enhanced Receiver (ROVER) workstations. Continued analysis of TACAIR inventories will continue throughout 2007 and beyond to determine the health of the legacy fleet as the F/A-18A-D is transitioned to the F-35.

Airborne Electronic Attack (AEA) / EA-18G

The Fiscal Year 2009 Budget requests \$128.9 million in RDT&E,N for continuation of SDD and \$1.68 billion in APN for 22 full rate production EA-18G Lot 3 aircraft. The EA-18G continues its development as the Navy's replacement for the EA-6B AEA aircraft. The EA-18G will replace carrier-based Navy EA-6B aircraft by 2012. A total quantity of 27 aircraft will be procured in LRIP. The Navy is using the F/A-18E/F MYP contract to buy the Lot 3 aircraft in Fiscal Year 2009. SDD continues on schedule with the two development aircraft having first flown in 2006 and are currently in developmental test at NAWC, Patuxent River. The program is on track to begin Operational Evaluation in fall 2008, leading to Initial Operating Capability (IOC) in Fiscal year 2009 and Full Operating Capability (FOC) in Fiscal Year 2012.

The Office of Naval Research (ONR) is working to develop adaptable, modular, and open architecture hardware, firmware, and software for a next-generation jamming capability that will be hosted by the EA-18G. In this regard, the Navy is working with the Air Force on jamming transmitters, and has leveraged previous work completed as part of their B-52

Standoff Jammer (SOJ). The Navy and Air Force technology teams continue to meet quarterly to ensure their efforts are coordinated. The Fiscal Year 2009 President's Budget requests \$69.3 million of RDT&E,N under PE 0604270N (EW Development) of which \$46.1M is for Next Generation Jammer (NGJ) technology maturation.

Airborne Electronic Attack (AEA) / EA-6B

The EA-6B is in near continuous use in Iraq and Afghanistan today in support of our troops on the ground as DoD's only tactical electronic attack aircraft performing communications jamming and information operation missions. Program priorities are current readiness of EA-6B and ALQ-99 systems, deployment of increased airborne electronic attack capability through products such as ICAP II/III aircraft upgrades, ICAP III kits, and Low Band Transmitters. In an effort to achieve those objectives, the Fiscal Year 2009 Budget requests \$33.4 million in APN for procurement of critical Airborne Electronic Attack (AEA) products and continuing EA-6B readiness improvements to increase operational availability and reduce operating cost of this low density high-demand aircraft. The EA-6B upgrades include procuring 22 Low Band Transmitters to provide a new jamming capability and replacement of aging transmitters to be employed on legacy EA-6B and new EA-18G aircraft. The Budget request also provides for operational safety and cost-wise readiness improvement initiatives to ensure availability of the aging EA-6B aircraft.

AV-8B

For the AV-8B, the Fiscal Year 2009 Budget requests \$29.9 million RDT&E,N funding to support development of the Engine Life Management Plan, Tactical Moving Map Display, LITENING Pod updates, and aircraft safety and reliability modifications, to include a Readiness Management Plan. We also request \$54.5 million of procurement funding for engine production line transition efforts, Open Systems Core Avionics Requirement (OSCAR) installs, engine sustainment efforts, Day Attack Upgrade/Attrition Recovery efforts, trainer aircraft upgrade efforts, and Litening Pod upgrades.

P-8A Multi-mission Maritime Aircraft (MMA)/P-3C

The future of the Navy's maritime patrol force includes plans for sustainment, modernization, and re-capitalization of the force. Results of the P-3 Service Life Assessment Program (SLAP) revealed the need for an aggressive approach to P-3 airframe sustainment. The accumulation of two decades of heavy demand by the Combatant Commanders, to include Operation Enduring Freedom and Operation Iraqi Freedom, resulted in advanced fatigue. Our Fiscal Year 2009 budget request includes \$297.9 million to sustain the P-3C until transition to the P-8A Multi-Mission Maritime aircraft. Over half of this amount (\$152.7 million) is for Special Structural Inspections - Kits (SSI-K), which will allow for airframe sustainment to support the CNO's P-3 Fleet Response Plan, as well as supporting EP-3E requirements which are executed within the P-3 SSI-K program. In December 2007, ongoing refinement of the model used to calculate wing stress indicated that the lower wing surface of the P-3 aircraft had fatigue beyond standards for acceptable risk resulting in the grounding of an additional 39 P-3 aircraft. To correct this issue,

additional funding is being sought to mitigate operational impacts. In addition to Fiscal Year 2008 requests, Fiscal Year 2009 funding is being separately requested for P-3C wing panels, supporting hardware and installation; acceleration of the Fatigue Life Management Program (FLMP); and P-8A acceleration. Key elements of the sustainment approach are strict management of requirements and flight hour use, special structural inspections to keep the aircraft safely flying, and increased use of simulators to satisfy training requirements. The Fiscal Year 2009 Budget request also reflects a systems sustainment and modernization budget of \$145.2 million to continue to address a multitude of mission essential efforts to replace obsolete components, integrate open architecture technology, and leverage commonality.

To recapitalize these critical aircraft, the Navy is developing the P-8A MMA, a 737 commercial-derivative aircraft. This past year, the program completed both its overall system Critical Design Review and its Design Readiness Review. The Fiscal Year 2009 Budget requests \$1,132 million in RDT&E,N for continuation of P-8A SDD efforts. Program objectives for 2009 include executing a contract option for three Stage II test aircraft, and completing the first flight of the initial Stage I test aircraft. Our comprehensive and balanced approach has allowed for re-capitalization of these critical assets.

EP-3 Replacement/Sustainment

The Navy plans to recapitalize its aging EP-3E fleet with a land-based, manned, airborne Intelligence Surveillance Reconnaissance (ISR) platform, called EPX, to meet maritime requirements. The Fiscal Year 2009 Budget requests \$74.6 million in RDTE,N funds for this effort to support studies focused on capabilities, documentation, and technology development. Our plan also requests \$55.7 million in RDT&E,N and \$72.4 million in APN to address EP-3E SIGINT sensor and communications equipment obsolescence issues that are necessary to keep the EP-3E viable until the replacement platform is fielded, and to develop follow-on capabilities that can be migrated to the EPX. This funding supports Operational Test (OT) and procurement for JMOD Common Configuration (JCC) Spiral 2 data fusion capabilities, and engineering development for JCC Spiral 3 and Recapitalization Capabilities Migration (RCM).

E-2D Advanced Hawkeye (AHE)

The E-2D Advanced Hawkeye is a critical enabler of transformational intelligence, surveillance and reconnaissance that provides robust overland capability against current and future cruise missile-type targets. The Advanced Hawkeye program modernizes the E-2 platform by replacing the current radar and other system components to maintain open ocean capability. The radar for the Advanced Hawkeye will provide enhanced performance overland and in the littoral environment while improving performance against clutter, adding transformational surveillance, and theater air and missile defense capabilities. The Fiscal Year 2009 Budget requests \$484.2 million in RDT&E,N for continuation of SDD and \$589.1 million in APN-1 for three Low-Rate Initial Production

(LRIP) Lot I aircraft. Two SDD aircraft are in Flight Test with the first mission system flight completed in December 2007. An 'Operational Assessment' is scheduled in 4th quarter of FY 2008 to support a Milestone-C decision planned for March 2009.

KC-130J

The Fiscal Year 2009 Budget requests \$153.5 million in APN for 2 KC-130J aircraft. To date, the Marine Corps have taken delivery of 29 KC-130J aircraft, with seven more aircraft on contract to be delivered during Fiscal Years 2008 through 2010. The planned procurement of 2 aircraft in Fiscal Year 2009 will bring the total number of KC-130J aircraft to 38. The KC-130J provides major enhancements to the current fleet of KC-130s, extending its range, payload, and refueling capabilities while reducing operating costs. Additionally, we have continued to ensure the tactical capability of our existing KC-130R/T series aircraft by installing night vision kits and upgraded aircraft survivability equipment.

T-6B Joint Primary Air Training System (JPATS)

The Fiscal Year 2009 Budget requests \$289.3 million to procure 44 aircraft under an Air Force multi-year procurement contract. The T-6 is the primary flight training aircraft for Navy and Marine Corps pilots, and Naval Flight Officers. It replaces the T-34C. The current requirement is for 315 aircraft, of which 98 aircraft have been procured to date.

Integrated Defensive Electronic Countermeasures (IDECM)

The Fiscal Year 2009 Budget requests \$125.6 million in aircraft procurement for the procurement of 73 ALQ-214 on-board Radio Frequency Countermeasure and \$24.7 million in Ammunition Procurement for 558 ALE-55 Fiber Optic Towed Decoys, pending a full rate production decision. The IDECM Block 3/ALE-55 Integrated Development Test and Operational Test (IDT/OT) identified several anomalies which required correction. The corrective actions have been incorporated, the system has been certified for Operational Test, and a Full-Rate Production decision is expected in the first quarter of Fiscal Year 2009.

Digital Radio Frequency Memory (DRFM) Onboard Jammer

The Fiscal Year 2009 Budget requests \$31.5 million in RDT&E,N for development of an on-board jammer that will employ state-of-the-art Digital Radio Frequency Memory devices to replace the ALQ-126B Jammer that was last produced in 1991. This effort will measurably improve the survivability of tactical naval aircraft by delaying, denying, and defeating air-to-air and surface-to-air missile system threats operating in the radio frequency spectrum. The lead platform for the DRFM program is the F/A-18C/D, followed by the AV-8B. An Analysis of Alternatives has been initiated to investigate alternative solutions, costs, and schedules. This developmental effort is late-to-need and the capability is required to pace rapidly proliferating threat systems.

Infrared Countermeasures (IRCM)

The Navy has a multi-faceted approach to providing aircrew protection against current and next generation IR guided MANPADs. The Fiscal Year 2009 Budget requests \$63.2 million in RDT&E,N for continued development of the TADIRCM Program to provide improved missile warning systems for the MV-22 (lead platform) and smaller USN helicopters such as H-1 & H-60 (follow-on). The Fiscal Year 2009 budget also requests \$25.8 million of APN-5 and \$226.0 million of 'APN-5 Supplemental' funding for procurement of the advanced 'Large Aircraft Infrared Counter-Measure System' (LAIRCM) for USMC CH-53E and CH-46E heavy-lift rotary aircraft. The Department of the Navy is also pursuing advanced expendables under the PANMC appropriation, and plans to complete fielding of an upgraded AAR-47B(V)2 Missile Warning System to provide improved probability of detection in clutter environments for those aircraft not getting DIRCM upgrades with additional Fiscal Year 2009 APN-5 Supplemental request.

II. ROTARY-WING AIRCRAFT

VH-71 Presidential Helicopter Replacement Aircraft

The Fiscal Year 2009 Budget requests \$1,047.8 million in RDT&E,N for continuation of SDD for the VH-71 program. The VH-71 program is executing an evolutionary acquisition approach through a two-part incremental development to deliver a safe, survivable and capable Presidential Vertical Lift aircraft while providing uninterrupted communications with all required agencies. The goal of Increment 1 is to satisfy an urgent need to provide a replacement Presidential helicopter with capability equivalent to or better than the current inventory of aircraft. Increment 2 will provide enhanced performance and state-of-the-art communications capabilities to satisfy long-term needs. The program is completing Increment 1 integrated test utilizing three government and two contractor test articles. Additionally, the government will take delivery of five Increment 1 Pilot Production aircraft. Increment 2 development will continue as this phase of the program is restructured, and the program progresses towards a System Functional Review. It is anticipated that a 2nd Quarter Defense Acquisition Board will approve a new VH-71 program baseline significantly reducing program concurrency and schedule risk. The Presidential Helicopter Replacement Program continues to receive executive level oversight and review in an effort to fully evaluate program progress while mitigating risks wherever possible.

V-22

The Fiscal Year 2009 Budget requests \$2.2 billion in APN for procurement of 30 MV-22s and continued development of follow-on block upgrades. Fiscal Year Budget request 2009 is the second year of the MYP contract. Our MYP strategy supports a continued cost reduction and affordability trend, provides a stable basis for industry, and best supports the warfighter. The Advance Acquisition Contract funding associated with the second year of the MYP and Fiscal Year 2008 Economic Ordering Quantity and Cost Reduction Investments was awarded in March 2008.

The Department of the Navy is developing, testing, evaluating, procuring, and fielding a tilt rotor, Vertical/Short Takeoff and Landing (V/STOL) aircraft for Joint Service application. The V-22 Program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the strike rescue needs of the Navy, and the special operations needs of the Air Force and Special Operations Command. The MV-22 variant will replace the CH-46E in the Marine Corps. The CV-22 variant provides a new capability and will augment the MC-130 in the Air Force/Special Operations Command inventory for special operations infiltration, extraction, and re-supply missions. The existing MH-53 fleet will be drawn down commensurate with the fielding of the CV-22. V-22 capability is being increased and fielded over time via a block upgrade acquisition strategy. MV-22 Block A provides a "Safe and Operational Test and Training Asset" configuration that is supporting developmental flight test, operational flight test and fleet training. Block B provides for correction of previously identified deficiencies and suitability improvements. Block C provides mission enhancements, primarily in the areas of environmental control systems upgrades and mission systems improvements. CV-22 Block 0/10 is a CV-unique configuration for Special Operations Capabilities to include radar and electronic countermeasures upgrades. CV-22 Block 20 provides an enhanced CV-unique configuration with planned communications and aircraft system performance upgrades. Both Osprey variants continue along their prescribed roadmaps for follow-on developmental and operational test. The CV-22 Program is currently in IOT&E. The MV-22 has successfully completed Operational Evaluation and the first operational deployment is underway.

AH-1Z / UH-1Y

The Fiscal Year 2009 Budget requests \$3.8 million in RDT&E,N for continued product improvements and \$474.1 million in APN for 20 AH-1Z/UH-1Y aircraft. 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 resolve existing safety deficiencies, enhance operational effectiveness, and extend the service life of both aircraft. 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 program will provide the Marine Corps with 180 AH-1Z helicopters and 100 UH-1Y models through a combination of remanufacturing and new production.

The first lot of low rate production aircraft has been delivered as well as several aircraft from the second lot. The final phase of OPEVAL is ongoing and a full rate production decision is expected later this year. We are developing the capability to newly fabricate some of the AH-1Z aircraft to reduce the number of AH-1W aircraft removed from service for remanufacturing. This will be particularly critical as the annual production rate increases. The optimum mix of remanufactured and newly fabricated aircraft is being evaluated with the results to be reflected in future budget requests.

MH-60R and MH-60S

The Fiscal Year 2009 Budget requests \$1185.8 million in APN and \$70.3 million in RDT&E,N for continued replacement of the Light Airborne Multi-Purpose System (LAMPS) MK III SH-60B and carrier-based SH-60F helicopters with the new configuration designated as the MH-60R. This program reached full-rate production with the first operational squadron standing up in 2006. The Fiscal Year 2009 Budget also requests \$549.7 million in APN and \$47.3 million in RDT&E,N funds for the MH-60S, to continue development of the Organic Airborne Mine Countermeasures (Block II) and the Armed Helo (Block III) missions. The MH-60S is the Navy's primary combat support helicopter designed to support Carrier and Expeditionary Strike Groups. It will replace four legacy platforms with a newly manufactured H-60 airframe. The Army and Navy are executing a platform multi-year contract that includes both the MH-60R and MH-60S, and a second multi-year contract for integration of mission systems into the MH-60R.

CH-53K Heavy Lift Replacement Program

The Fiscal Year 2009 Budget requests \$570.5 million RDT&E,N to continue SDD of the CH-53K, which will replace the Marine Corps' current heavy-lift helicopter, the CH-53E "Super Stallion." The CH-53K program is on track to conduct a Preliminary Design Review later this year and the Critical Design Review in late Fiscal Year 2009.

The legacy CH-53E was built for sustained shipboard operations and first flown in 1974, the CH-53E continues to demonstrate its value as an expeditionary heavy-lift platform. This aging but very relevant helicopter is in high demand, making significant contributions to missions in Iraq, Afghanistan, and the Horn of Africa; non-combatant evacuation operations in Lebanon; and disaster relief operations around the world. Expeditionary heavy-lift capabilities will continue to be critical to successful sea-based operations in future anti-access, area-denial environments, enabling sea basing and the joint operating concepts of force application and focused logistics.

As a design evolution of the CH-53E, the new-build CH-53K will fulfill sea-based, heavy-lift requirements not resident in any of today's platforms, and directly contribute to the increased agility, lethality, and persistent presence of Joint Task Forces and Marine Air-Ground Task Forces. The CH-53K will include significant enhancements to extend range and payload performance; expand survivability and force protection capabilities; improve inter-modal cargo handling and turn-around; and meet interoperability requirements while reducing heavy-lift operations and support costs.

The CH-53K will be capable of transporting 27,000 pounds to austere landing sites at distances of 110 nautical miles under challenging environmental conditions. Task Force commanders of 2015 and beyond will then have the option to rapidly insert, to the far sides of the littorals, a force equipped with armored combat vehicles and heavy weapons at a rate equivalent to two up-armored High Mobility Multi-Wheeled Vehicles (HMMWVs) per sortie. To sustain that force, the CH-53K will be the critical air connector to sea-based

logistics, transporting up to three independent loads per sortie, with each load tailored to individual receiving units. This efficient, reliable, cost-effective, heavy-lift capability will also address critical challenges in maintainability, reliability, and affordability found in present-day operations.

III. WEAPONS

In an era of continuing global uncertainty and shifting threats, the Department of the Navy is developing and deploying air-to-air and strike weapons to enhance our warfighter's capabilities in an evolving and uncertain security environment. Our Fiscal Year 2009 Budget request for each new weapon or weapon system modification program is directed towards deterring potential aggressors, power-projection, sea-control, or other maritime and expeditionary warfare security objectives. Our budget request would provide resources for weapon systems that directly support troops deployed in the field - as well as weapon systems that will shape our plans to address potential near-peer competitors. The Navy/Marine Corps weapons programs take into account the lessons-learned from on-going combat operations as well as the results of our research, development, and test efforts. The resulting Fiscal Year 2009 weapons budget request provides for a portfolio of affordable weapons programs that is balanced between solutions to address Global War on Terrorism (GWOT) threats and development of new military capabilities.

Direct Attack Moving Target Capability

In response to an urgent requirement identified by the Combatant Commanders in Iraq and Afghanistan, the Department of the Navy approved a Rapid Deployment Capability (RDC) in Fiscal year 2008 to develop a Direct Attack Moving Target Capability known as DAMTC. DAMTC improves our ability to attack and strike moving targets by leveraging off of the highly successful, congressionally-supported procurement of dual-mode systems. The Fiscal Year 2009 Budget requests \$35.9 million to transition the RDC to a formal acquisition program, support a competitive acquisition strategy, and acquire 2,758 additional weapons from potentially multiple sources at reduced costs.

Joint Air-to-Ground Missile (JAGM)

The Department of the Navy, in conjunction with our Army partners, received formal approval from USD(AT&L) to proceed with the development of the Joint Air-to-Ground Missile (JAGM) in January 2008. JAGM will become the next-generation, forward firing precision-guided munition capable of being launched from Navy/Marine Corps fixed-wing, rotary-wing, and unmanned platforms with both GWOT and conventional warfare applications. Under OSD(AT&L) direction, the JAGM program implements a technology development strategy to carry two contractors through Prototyping & Test and the Preliminary Design Review (PDR) phase of the program. Using a rolling down-select strategy, the Navy and Army will determine how far beyond PDR the two contractors should potentially be carried to ensure a high-level of technical maturity and risk reduction

before proceeding into a formal System Development and Demonstration (SDD) program. The intent behind this prototyping and technology development strategy is to improve the probability of overall program success and reduce program costs through competition. To support this critical development program, our Fiscal Year 2009 budget requests approval of \$62.3 million of RDT&E,N to implement this acquisition strategy.

Hellfire Weapon System

While the Department of the Navy develops JAGM, we are requesting continued support for legacy Hellfire weapons. Hellfire continues to be one of the priority weapons in the Global War on Terrorism and provides our Navy/Marine Corps warfighters the ability to attack targets in the caves of Afghanistan as well as the urban canyons of Baghdad. Our Fiscal Year 2009 Budget request is for \$95.4 million for 1,068 weapons with a mix of Thermobaric, blast/fragmentation, and anti-armor warheads to provide the maximum operational flexibility to our warfighters.

Joint Standoff Weapon (JSOW)

The combat proven JSOW family of joint Navy and Air Force air-to-ground weapons continues on cost and schedule to develop a JSOW-C1 variant. JSOW C-1 adds a 'moving target capability' to the highly successful baseline JSOW-C variant with the addition of a datalink and guidance software improvements. The Fiscal Year 2009 Budget requests \$22.5 million for continued JSOW C-1 development and \$149.1 million for JSOW-C production totaling 496 All-Up-Rounds to fill our weapons magazines that remain below approved Non-Nuclear Ordnance Requirements. Production of other JSOW variants remains deferred as we continue to work with the Office of the Secretary of Defense and our sister Service to resolve unexploded battlefield ordnance issues that are of a concern to the Department and our Allies.

Tactical Tomahawk BLK IV Cruise Missile

The Tactical Tomahawk budget request supports the continued procurement of this combat proven, deep-attack weapon in order to meet ship-fill loadouts and potential combat requirements. The BLK IV Tactical Tomahawk missile is in a full-rate production status and the Fiscal Year 2009 Budget request is \$281.1 million for an additional 207 BLK IV weapons and associated support.

Harpoon Block III Anti-Ship Cruise Missile

The Department of the Navy is upgrading our air-launched and surface-launched Harpoon cruise missiles to provide the all-weather, anti-surface warfare (ASuW) capability needed to operate with 'improved selectivity' in the cluttered littoral environment. Under the Harpoon BLK III Program, the Navy is upgrading this very capable system to enhance our standoff ASuW operations by integration of: network; two-way data-link; and GPS capability for use under stringent littoral battle-space rules of engagement. The Fiscal Year 2009 Budget requests \$68.2 million in RDT&E,N to continue development of this capability.

Small Diameter Bomb (SDB II)

The Department of the Navy is partnering with the Air Force on the development of the Small Diameter Bomb II (SDB II) program. SDB II provides an adverse weather, day or night standoff capability against mobile, moving, and fixed targets - that also allows for target prosecution while minimizing collateral damage. SDB II is of special interest to the Department as it will be integrated into the 'internal carriage' of Navy/Marine Corps variants of the Joint Strike Fighter (JSF). SDB II acquisition consists of a competitive development, risk reduction phase between two industry teams with a down-select at Milestone-B that is estimated to occur in early Fiscal Year 2010. The FY 2009 Budget requests \$19.6 million of RDT&E,N for the continued development of this joint program.

Advanced Anti-Radiation Guided Missile (AARGM)

The AARGM development program transforms the legacy High-Speed Anti-Radiation Missile (HARM) into an affordable, lethal, and flexible time-sensitive strike weapon system. AARGM adds multi-spectral targeting capability with supersonic fly-out to destroy sophisticated enemy air defenses and expand upon the traditional anti-radiation missile target set. The program has completed all design reviews, began its formal test program in Fiscal Year 2007, and is scheduled to be deployed on the F/A-18 Hornet in 2010. The Fiscal Year 2009 Budget requests \$16.4 million for the development and test program and \$42.7 million for low-rate initial production of tactical and training weapons.

Sidewinder AIM-9X Air-to-Air Missile

The Joint Navy/Air Force (Navy led) Sidewinder missile is the newest variant of the Sidewinder family and is the only short-range infrared Air-to-Air missile integrated on USN/USAF strike-fighter aircraft. This 5th Generation-9X weapon incorporates high off-bore sight acquisition capability and thrust vectoring to achieve superior maneuverability and provides increased sensitivity through an imaging infrared focal plane array seeker and advanced processing. The Fiscal Year 2009 Budget requests \$6.7 million for research, development and test efforts, and \$57.5 million for production of 205 all-up-rounds and associated hardware.

Advanced Medium-Range Air-to-Air Missile (AMRAAM) AIM-120

AMRAAM is a Joint Navy/Air Force (Air Force led) advanced, medium range missile that counters existing aircraft and cruise missile threats with advanced electronic attack capabilities operating at high/low altitudes from both beyond visual range and within visual range. AMRAAM provides an Air-to-Air First Look, First Shot, First Kill capability working within a networked environment in support of the Navy's Sea Power-21 Theater Air and Missile Defense Mission Area. The Fiscal Year 2009 Budget requests \$8.6 million for research, development, test and evaluation efforts and \$146.8M for production of 147 all-up-rounds and associated hardware.

IV. OTHER

Strike Fighter Shortfall

Our aviation plan balances aviation capabilities through cost-wise investments in recapitalization, sustainment, and modernization programs. One of the issues we will be dealing with in the Fiscal Year 2010 budget development process is the strike fighter shortfall.

F/A-18A/B/C/D aircraft are reaching life limits and will require extensions to bridge the gap to JSF. The Service Life Assessment Program (SLAP) is currently assessing the remaining life on these airframes. The initial SLAP analytical data necessary to determine extension to 10,000 flight hours was released in January 2008. Costing data to support the extension is planned to be released in June 2008, and the required engineering change proposals to support the extension will begin to be developed in July 2008.

In 2010, the large majority of the strike fighter shortfall resides in the Marine Corps, in particular with their FA-18D and AV-8B fleets. An optimistic estimate for the magnitude of the strike fighter shortfall is a projected 125 aircraft shortfall in 2017 (Navy and Marine Corps) assuming the F/A-18 E/F and JSF program of record.

The impact on air wings is largely positive as Hornets are replaced by the modern JSF aircraft. If the shortfall increases due to delays in JSF, budget cuts reducing F/A-18E/F procurement, or early Hornet retirement, one option will be smaller and potentially less effective CVWs.

SUMMARY

The Fiscal Year 2009 President's Budget request reflects considerable effort in identifying affordable solutions for the Department's aviation programs through a balance between sustaining fielded capabilities, as they are employed in the GWOT and continued forward presence worldwide, and a substantive recapitalization effort that will deliver significantly better capabilities to the war fighter. The Department's aviation acquisition team continues to work aggressively to identify efficiencies in the development, testing and subsequent procurement of platforms, components, and weapons systems in order to ensure that investments made result in quality products and services provided to the fleet.

In closing Mr. Chairman, we thank you for the opportunity to testify before your Subcommittee regarding the Department of the Navy's aviation programs.