

MH-60S Fleet Combat Helicopter

SUMMARY

- Navy testers reported that their follow-on operational test and evaluation verified the correction of all major deficiencies from the MH-60S operational evaluation.
- Over 70 baseline MH-60S aircraft were in Fleet service by the end of FY04.
- The Navy completed their portion of the Joint Army-Navy live fire test and evaluation (LFT&E) program for H-60 variants in FY04. Analyses will extend into FY05.



The MH-60S will replace the aging fleet of CH-46Ds, most of which have exceeded their original service life.

SYSTEM DESCRIPTION AND MISSION

The MH-60S Fleet Combat Support Helicopter will replace the aging fleet of CH-46Ds, most of which have exceeded their original service life.

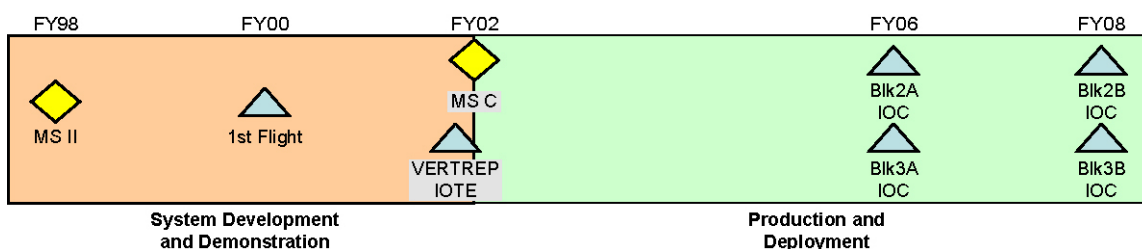
The primary mission of the baseline, Block-1 MH-60S, is to provide vertical replenishment,

vertical onboard delivery, ship-to-shore support, and Amphibious Task Force search and rescue. Secondary missions include special warfare support, medical evacuation, and noncombatant evacuation. The Block-2 MH-60S version will perform the Airborne Mine Countermeasure (AMCM) mission. The Block-3 MH-60S, the Armed Helicopter, will conduct Combat Search and Rescue, Anti-Surface Warfare, and Aircraft Carrier Plane Guard missions.

The MH-60S is an Army UH-60L Black Hawk airframe modified slightly for operation in the marine environment and aboard ship. It uses the digital Common Cockpit design used in the MH-60R. It has multi-functional displays and a complex tactical data processing system. Avionics include dual UHF/VHF transceivers, dual Embedded Global Positioning Systems/inertial navigation systems, and night vision device-compatible heads-up displays. The AMCM version will incorporate a data link, a sensor workstation, a winch and tether/towing system, and one of five different mine countermeasure systems. The Armed Helicopter version will include tactical moving maps, a forward-looking infrared sensor with a laser range finder/target designator, crew-served side suppression weapons, Hellfire missiles, forward firing guns and rockets, and an integrated self-defense system.

The Assistant Secretary of the Navy for Research, Development, and Acquisition granted a waiver from full-up system-level live fire testing of the MH-60R under an extension of a July 1996 memorandum. The Army and Navy established a joint LFT&E test program for the UH-60M, MH-60R, and MH-60S development programs. The joint effort recognized the high degree of commonality among the H-60 variants' structural and dynamic components. Both Services provided airframe components and the prototype YCH-60S aircraft for static and dynamic testing which began in 2001.

TEST AND EVALUATION ACTIVITY



NAVY PROGRAMS

During FY04, the focus was on installing the AMCM sensor workstation, and winch and tether/towing system into MH-60S test aircraft. Contractor ground tests of the AQS-20A system and static tow/strain tests of the airframe are in progress.

The Army and Navy joint live fire test program continued static and dynamic tests on aircraft components and on the YCH-60S test aircraft. Testing continued throughout the year at the Army's Aberdeen Proving Grounds, Maryland, and at the Naval Air Warfare Center-Weapons Division, China Lake, California. This year's effort completes the Navy portion of the joint tests on H-60 variants. Analytical efforts will extend into FY05.

TEST AND EVALUATION ASSESSMENT

The 70 baseline MH-60S aircraft in Fleet service by the end of FY04 exceeded the Chief of Naval Operations' Fleet readiness goals. The production line incorporated installation of the 35-pound centrifugal vibration dampers required to reduce vibrations noted during operational evaluation.

Either contractual or technical delays are affecting development of the five mine countermeasure systems. Delays between 7 and 33 months will adversely impact fielding of a fully capable AMCM version of the MH-60S. Similarly, there is an 8-month delay affecting the Armed Helicopter version.

Live fire test results and legacy H-60 databases indicate the baseline MH-60S is survivable in its intended operational environment. It is damage-tolerant and can withstand multiple small-arms projectile hits, continue to fly, and often complete its mission in spite of damage. The data from the joint live fire test program is adequate to evaluate the survivability of the AMCM version.