

## MH-60S Fleet Combat Support Helicopter

### Executive Summary

- Block 1 MH-60S is in Fleet use with more than 110,000 flight hours of operation; Blocks 2 and 3 remain in development.
- Block 2 variant will conduct the Airborne Mine Countermeasures (AMCM) mission primarily from the Littoral Combat Ship.

### System

- The MH-60S is a helicopter modified into three variants (Blocks) from the Army UH-60 Blackhawk. It is optimized for operation in an ocean spray environment and aboard ships at-sea.
- The blocks share common cockpit avionics and flight instrumentation with the MH-60R.
- Installed systems differ by Block based on mission:
  - Block 1 - Vertical Replenishment: precision navigation and communications, maximum cargo, or passenger capacity
  - Block 2 - AMCM: Data link (Link-16), AMCM systems operator workstation, tether/towing system, any one of five available mine countermeasure systems
  - Block 3 - Armed Helicopter: Tactical moving map display, forward-looking infrared with laser designator, crew-served side machine guns, Hellfire air-to-surface missiles, and defensive electronic countermeasures



### Mission

The Maritime Component Commander can employ variants of MH-60S from ships or shore stations to accomplish (by Block):

- Block 1: Vertical replenishment, internal cargo and personnel transport, medical evacuation, search and rescue, and aircraft carrier plane guard
- Block 2: Detection, classification, or neutralization of sea mines depending on which system is installed
- Block 3: Combat search and rescue, Anti-Surface Warfare, aircraft carrier plane guard, and special warfare support

### Activity

- The Navy continues preparation of requirements and test documents for operational testing planned for 2006.
- The MH-60S is a covered system for Live Fire Test and Evaluation. The approved LFT&E strategy included a coordinated program among the Army UH-60M, the Navy MH-60R and MH-60S, and the DOT&E Joint Live Fire Programs. MH-60S unique LFT&E has been completed. Testing under the Joint Live Fire program will be complete in early FY06.
- MH-60S underwent no operational testing this year. Contractor and developmental testing for Block 2 and Block 3 variants continues.

### Assessment

- Five Littoral Combat Ship-related Mine Warfare subsystems for Block 2 are separate programs of record. Development and integration of three subsystems within the MH-60S are behind schedule and are likely to adversely impact the projected 2006 operational testing and the early 2007 support date.

- The Joint H-60 Live Fire testing to date has revealed a high risk of fuel cell ullage explosion, resulting in disabling of the fuel system, though the testing did not result in a catastrophic explosion of the aircraft. The H-60 has also shown a high risk of clogging the transmission chip detector with ballistic damage fragments, resulting in loss of lubrication and oil flow. The MH-60S rotor dampener lines are relatively soft and easily penetrated, which increases the risk of severe ground resonance problems on landing.
- Block 1 aircraft are effective and have consistently met Chief of Naval Operations Fleet Readiness goals and Ready for Training metrics. Issues identified during Block 1 IOT&E have been corrected. The 81 aircraft delivered as of late June 2005 have accumulated in excess of 110,000 flight hours.

### Recommendations

None.

# NAVY PROGRAMS