



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-282



MH-60S Fleet Combat Support Helicopter (MH-60S)

As of FY 2011 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs	3
Program Information	5
Responsible Office	5
References	5
Mission and Description	6
Executive Summary	7
Threshold Breaches	8
Schedule	9
Performance	12
Track to Budget	15
Cost and Funding	16
Low Rate Initial Production	23
Foreign Military Sales	24
Nuclear Costs	24
Unit Cost	25
Cost Variance	28
Contracts	31
Deliveries and Expenditures	37
Operating and Support Cost	38

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

MH-60S FLEET COMBAT SUPPORT HELICOPTER (MH-60S)

DoD Component

Navy

Responsible Office

CAPT Dean Peters
Air ASW, Assault and Special Mission
Programs (PMA-299), 47123 Buse Road
Unit IPT, Suite 156
Patuxent River, MD 20670-1547

Phone: 301-757-5409
Fax: 301-757-5276
DSN Phone: 757-5409
DSN Fax: 757-5276
Date Assigned: November 27, 2007

dean.peters@navy.mil

References

SAR Baseline (Production Estimate)

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated November 9, 2002

Approved APB

NAE Approved Acquisition Program Baseline (APB) dated December 12, 2008

Mission and Description

The MH-60S Multi-Mission Combat Support (HSC) has three mission areas designated as "Blocks". Block 1 Combat Support provides Vertical Replenishment (VERTREP); internal transport of passengers, mail and cargo; Vertical On Board Delivery (VOD); Airhead Operations; and day/night Search and Rescue (SAR). Secondary roles include torpedo and drone recovery, Noncombatant Evacuation Operations (NEO), Sea Air Land (SEAL) and Explosive Ordnance Disposal (EOD) support.

Block 2 Airborne Mine Countermeasures (AMCM) provides an Organic AMCM capability for the Carrier Strike Group and Expeditionary Strike Group. AMCM is comprised of Block 2A which includes Carriage, Stream, Tow and Recovery (CSTRS), Common Console, Auxiliary Fuel Tank, and Sonar Mine Detection Set (AQS-20A). Block 2B includes AES-1 Airborne Laser Mine Detection System (ALMDS), ASQ-235 Airborne Mine Neutralization System (AMNS), ALQ-220 Organic Airborne and Surface Influence Sweep (OASIS), and AWS-2 Rapid Airborne Mine Clearance System (RAMICS).

Block 3 Armed Helo provides the Navy with organic Surface Warfare (SUW), Force Protection (FP), and Combat Search and Rescue (CSAR), capabilities. Additional Armed Helo mission areas include Special Warfare Support (SWS), Maritime Interdiction Operations (MIO), and Carrier (CV) Plane Guard/SAR.

These missions are vital to the Navy's role in power projection in the littoral areas of the world. The first 50 aircraft are only capable of performing Block 1 Combat Support Missions. Aircraft 51 to 275 will be capable of performing Block 1 Combat Support Missions, as well as Block 2 AMCM missions or Block 3 Armed Helo missions with installation of ancillary kits.

Executive Summary

159 of 275 MH-60S helicopters have been delivered to date. In addition to the mission areas described in the Mission and Description section of this document, MH-60S helicopters have maintained a 24/7 presence in Kuwait and Iraq conducting Air Ambulance missions with the U.S. Army since 2004. MH-60Ss have been utilized extensively for Humanitarian Assistance and Disaster Relief (HADR) in the aftermath of the 2004 Indonesia Tsunami, the 2005 Pakistan earthquake, the 2007 California wildfires and most recently in the 2010 Haitian earthquake relief effort.

The Sikorsky Airframe Multi Year VII contract was awarded on December 12, 2007, which covers Lots IX-XIII for a total of 90 aircraft. FY08 and FY09 supplementals added 4 additional aircraft (2 for Global War on Terrorism (GWOT) and 2 for Overseas Contingency Operations (OCO)).

The Armed Helo Block 3A Full Rate Production (FRP) Acquisition Decision Memorandum (ADM) was signed by Assistant Secretary of the Navy, Research, Development and Acquisition (ASN(RDA)) on February 13, 2009, and Armed Helo Block 3B (Link-16) FRP ADM was signed by ASN(RDA) on April 14, 2009.

The current MH-60S Acquisition Program Baseline (APB) updating schedule, Operating and Support (O&S) cost and KPPs was approved on December 12, 2008. The MH-60S program has deviated from this baseline for Research, Development, Test & Evaluation (RDT&E) cost and schedule parameters associated with Airborne Mine Countermeasures (AMCM) Initial Operational Capability (IOC) and Interim Program Review (IPR) IV. A Program Deviation Report (PDR) to initiate a new APB baseline has been submitted to ASN(RDA). The MH-60S program is managing cost growth risk through pro-active engagement with industry to identify and mitigate high cost drivers, and capturing those efficiencies in fixed priced multi-year contracts. Details of the cost and schedule breaches are reported in the cost and schedule sections.

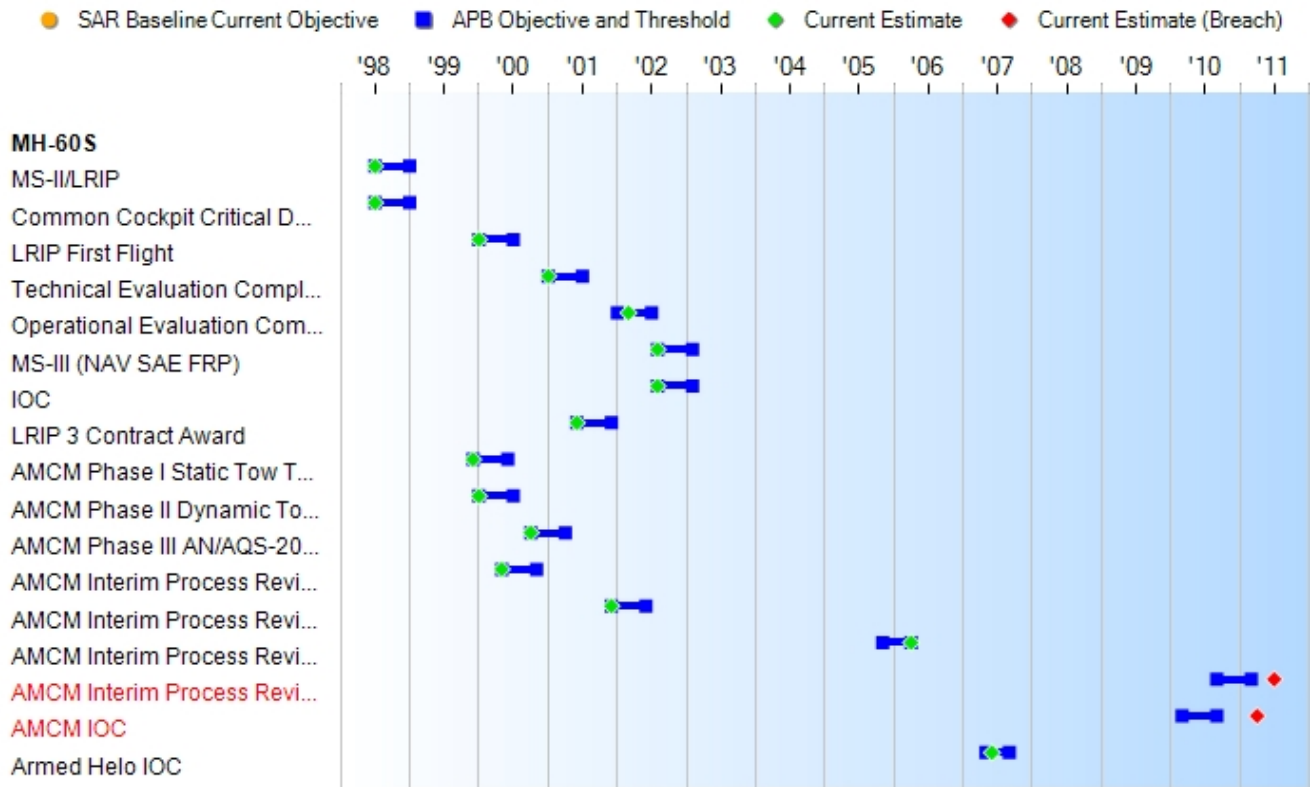
There is no impact to program performance as listed in the current approved baseline.

There are no significant software related issues for the program at this time.

Threshold Breaches

APB Breaches		Explanation of Breach
Schedule	<input checked="" type="checkbox"/>	<p>Schedule: The Airborne Mine Countermeasures (AMCM) Initial Operational Capability (IOC) has slipped from March 2010 to April 2011 and Interim Program Review (IPR) IV current estimate has slipped from September 2010 to July 2011. Technical issues associated with the integration of AMCM sensors on the MH-60S are the cause of the delays.</p> <p>Cost: The Research, Development, Test & Evaluation (RDT&E) Cost has increased from \$550.6M to \$634.6M (BY) due to increased RDT&E funding for AMCM, allowing out-year extension of program efforts to integrate and test AMCM sensors being developed by Program Executive Office Littoral and Mine Warfare (PEO(LMW)).</p> <p>A Program Deviation Report (PDR) to initiate a new Acquisition Program Baseline (APB) has been submitted to Assistant Secretary of the Navy, Research, Development and Acquisition (ASN(RDA)).</p> <p>This program reflects a significant Nunn-McCurdy breach to the original baseline that was first reported in the December 2005 SAR. The supporting breach information and explanations can be found in the Unit Cost Report section of that SAR.</p>
Performance	<input type="checkbox"/>	
Cost	<input checked="" type="checkbox"/>	
RDT&E	<input type="checkbox"/>	
Procurement	<input type="checkbox"/>	
MILCON	<input type="checkbox"/>	
Acq O&M	<input type="checkbox"/>	
O&S Cost	<input checked="" type="checkbox"/>	
Unit Cost	<input type="checkbox"/>	
PAUC	<input type="checkbox"/>	
APUC	<input type="checkbox"/>	
Nunn-McCurdy Breaches		
Current UCR Baseline		
PAUC	None	
APUC	None	
Original UCR Baseline		
PAUC	Significant	
APUC	Significant	

Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
MS-II/LRIP	Jul 1998	Jul 1998	Jan 1999	Jul 1998
Common Cockpit Critical Design Review	Jul 1998	Jul 1998	Jan 1999	Jul 1998
LRIP First Flight	Jan 2000	Jan 2000	Jul 2000	Jan 2000
Technical Evaluation Complete	Jan 2001	Jan 2001	Jul 2001	Jan 2001
Operational Evaluation Complete	Jan 2002	Jan 2002	Jul 2002	Mar 2002
MS-III (NAV SAE FRP)	Aug 2002	Aug 2002	Feb 2003	Aug 2002
IOC	Aug 2002	Aug 2002	Feb 2003	Aug 2002
LRIP 3 Contract Award	Jun 2001	Jun 2001	Dec 2001	Jun 2001
AMCM Phase I Static Tow Test and OEI Test	Dec 1999	Dec 1999	Jun 2000	Dec 1999
AMCM Phase II Dynamic Tow Test	Jan 2000	Jan 2000	Jul 2000	Jan 2000
AMCM Phase III AN/AQS-20 Tow Demonstration	Oct 2000	Oct 2000	Apr 2001	Oct 2000
AMCM Interim Process Review I	May 2000	May 2000	Nov 2000	May 2000
AMCM Interim Process Review II	Dec 2001	Dec 2001	Jun 2002	Dec 2001
AMCM Interim Process Review III	Apr 2005	Nov 2005	Apr 2006	Apr 2006
AMCM Interim Process Review IV	N/A	Sep 2010	Mar 2011	Jul 2011 ¹ (Ch-1)
AMCM IOC	Jun 2005	Mar 2010	Sep 2010	Apr 2011 ¹ (Ch-1)
Armed Helo IOC	Mar 2006	May 2007	Sep 2007	Jun 2007

¹ APB Breach

Change Explanations

(Ch-1) Airborne Mine Countermeasure (AMCM) Initial Operational Capability (IOC) changed from MAR 2010 to APR 2011 and Interim Program Review (IPR) IV changed from SEP 2010 to JUL 2011. Change is due to the MH-60S/AQS-20A being preemptively removed from Operational Test (OT) (MH-60S OT-IIC and AQS-20A OT-IIB) in response to Commander Operational Test and Evaluation Force (COTF) Anomaly Reports that indicated reliability thresholds for AMCM specific mission equipment may not be met. Integration anomalies were identified, fixes have been implemented, and test resumed July 2009. In August 2009, testing was temporarily put on hold after anomalies were found with the Tow Hook and Winch. During the Engineering Investigations (EIs), the team was able to re-produce the anomalies and they are being addressed in an Engineering Change Proposal (ECP). The aircraft returned to flight test in October 2009. The number of flights required to prove robustness of the system will preclude IOC by the threshold date. AMCM IPR IV will follow three months after IOC to allow time for receipt of the OT Report and completion of the milestone brief.

Acronyms and Abbreviations

AMCM - Airborne Mine Countermeasure

APB - Acquisition Program Baseline

AQS-20A - Sonar Mine Detection Set

IOC - Initial Operational Capability

LRIP - Low Rate Initial Production

MS - Milestone

NAV SAE FRP - Navy Service Acquisition Executive Full Rate Production

OEI - Office of Environmental Information

Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
*Airspeed-Vmax (KIAS) (Block 1 configuration)				
175	175	150	154	154
*Amphibious SAR Mission Radius (nm) (Block 1 configuration)				
150	150	50	50	50
*VERTREP Endurance (hrs) (Block 1 configuration)				
3	3	1.75	1.85	1.85
*VERTREP, External (lbs) (Block 1 configuration)				
5,500	5,500	5,500	6,000	7,500
*VOD (lbs) (Block 1 configuration)				
5,500	5,500	5,500	5,000	5,500
MTBF (hrs)				
20.3	20.3	20.3	34.3	34.3
MTTR (hrs)				
3.6	N/A	N/A	2.6	2.6
*Organic CSAR Overland Mission Radius (nm)				
300	200	150	194	194
*SWS Mission Radius (nm)				
300	N/A	N/A	129	129
*CV Plane Guard/SAR Mission Radius (nm)				
200	200	100	114	114
*AMCM Free Flight Endurance (mins)				
150	150	120	TBD	136
*AMCM Hover Endurance (mins)				
90	90	75	TBD	75
*AMCM Tow Endurance (mins) /6				
75	75	60	TBD	70.7
*AMCM Hot Temp Tow Endurance(105 deg F)				
45	45	30	TBD	45
*AMCM Tow Turns (25 knot wind) (deg/sec)				
1.5	1.5	1.0	3.0	1.1
*AMCM Wind Speed Tow (KIAS)				

30	30	25	25	25	
*AMCM Block 2 Information Dissemination (%)					
95	95	95	TBD	95	
*AMCM Block 2 Information Integrity (%)					
99	99	99	TBD	99	
*AMCM Block 2 Interoperability (%)					
100	100	100	TBD	100	
*Armed Helo Airspeed-VMAX (KIAS)					
165	130	130	135	135	
*Armed Helo FMC Rate (%)					
60	60	56	60	60	
*Armed Helo MC Rate (%)					
75	75	69	74	74	
*HC Interoperability (%)					
100	DELETED	DELETED	DELETED	DELETED	
*MIO Endurance (min)					
N/A	45	30	TBD	30	(Ch-1)
*Net Ready (%)					
N/A	100	100	TBD	100	(Ch-1)
*Force Protection					
N/A	Crash Worthy Seats Pilot 35G, 25G, 20G Crew 20G, 20G, 20G	Crash Worthy Seats Pilot 20G, 20G, 10G Crew 14G, 8G, 12G	TBD	Crash Worthy Seats Pilot 20G, 20G, 10G Crew 14G, 8G, 12G	(Ch-1)
*Combat Survivability					
N/A	Pred Survive 95% prior to launch 80% after launch	Warning & Protect RF/IR, Threat	TBD	Warning & Protect RF/IR, Threat	(Ch-1)

Requirements Reference

MH-60S Operational Requirement Document Change 2 dated February 15, 2008

Change Explanations

(Ch-1) Maritime Interdiction Operations (MIO) Endurance, Net Ready (%), Force Protection and Combat Survivability were added to the MH-60S Operational Requirements Document (ORD) Change Two, approved February 2008.

Notes

* Denotes Key Performance Parameters (KPPs)

Acronyms and Abbreviations

AMCM - Airborne Mine Countermeasure
APB - Acquisition Program Baseline
CSAR - Combat Search and Rescue
CV - Carrier
deg - Degree
F - Fahrenheit
FMC - Fully Mission Capable
HC - Helicopter Combat Support
hrs - Hours
KIAS - Knots Indicated Airspeed
lbs - Pounds
MC - Mission Capable
min - Minutes
MINS - Minutes
MIO - Maritime Interdiction Operations
MTBF - Mean Time Between Failures
MTTR - Mean Time to Repair
NM - Nautical Miles
RF/IF - Radio Frequency/Infrared
SAR - Search and Rescue
SEC - Seconds
SWS - Special Warfare Support
VERTREP - Vertical Replenishment
VMAX - Velocity Maximum
VOD - Vertical On Board Delivery

Track to Budget

RDT&E

Appn	BA	PE	Project	Name
Navy	1319	05	0604212N	
			1709	ASW and Other Helo Development/MH-60S VERTREP Sunk
			2415	ASW and Other Helo Development/MH-60S Development , VERTREP
			2772	ASW and Other Helo Development/Sentient Sensor, Sunk
			2773	ASW and Other Helo Development/MH-60S Engineering Development, Sunk
			9213	ASW and Other Helo Development/ADV Tow Cable Design, Sunk

Navy	1319	05	0604216N	
			3053	Multi-Mission Helicopter Upgrade Development/MH-60S AMCM (Sunk)

Procurement

Appn	BA	PE	Line Item	Name
Navy	1506	01	0204453N	
			0179	MH-60S (MYP)

Navy	1506	02	0204453N	
			0240	MH-60S (Sunk)

Navy	1506	06	0204453N	
			0605	MH-60S (Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 1998 \$M			BY 1998 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	390.9	541.9	596.1	634.6 ¹	421.4	585.8	723.8
Procurement	4879.2	6062.0	6668.2	6030.9	5672.4	7134.8	7251.9
Flyaway	--	--	--	4981.5	--	--	6016.8
Recurring	--	--	--	3980.2	--	--	4770.1
Non Recurring	--	--	--	1001.3	--	--	1246.7
Support	--	--	--	1049.4	--	--	1235.1
Other Support	--	--	--	898.9	--	--	1067.8
Initial Spares	--	--	--	150.5	--	--	167.3
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5270.1	6603.9	N/A	6665.5	6093.8	7720.6	7975.7

¹ APB Breach

Cost Notes

Cost: The RDT&E Cost estimate has increased by approximately 6.5% from \$550.6M to \$634.6M (BY) due to increased RDT&E funding for AMCM, allowing out year extension of program efforts to integrate and test AMCM sensors being developed by Program Executive Office Littoral and Mine Warfare (PEO(LMW)).

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	237	271	275
Total	237	271	275

Quantity Notes

FY08 and FY09 supplementals added 4 additional aircraft (2 for Global War On Terrorism (GWOT) and 2 for Overseas Contingency Operations (OCO)).

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	589.2	48.9	38.9	25.7	15.5	5.3	0.3	0.0	723.8
Procurement	4497.5	473.1	549.9	488.3	460.4	468.7	283.7	30.3	7251.9
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2011 Total	5086.7	522.0	588.8	514.0	475.9	474.0	284.0	30.3	7975.7
Jun 2008 Total	5067.8	504.1	549.5	497.6	465.0	438.7	241.2	79.1	7843.0
Delta	18.9	17.9	39.3	16.4	10.9	35.3	42.8	-48.8	132.7

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	177	18	18	18	18	18	8	0	275
PB 2011 Total	0	177	18	18	18	18	18	8	0	275
Jun 2008 Total	0	173	18	18	18	18	18	8	0	271
Delta	0	4	0	0	0	0	0	0	0	4

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1997	--	--	--	--	--	--	6.9
1998	--	--	--	--	--	--	29.7
1999	--	--	--	--	--	--	36.8
2000	--	--	--	--	--	--	42.3
2001	--	--	--	--	--	--	30.5
2002	--	--	--	--	--	--	50.2
2003	--	--	--	--	--	--	24.1
2004	--	--	--	--	--	--	49.8
2005	--	--	--	--	--	--	77.9
2006	--	--	--	--	--	--	78.8
2007	--	--	--	--	--	--	81.3
2008	--	--	--	--	--	--	38.1
2009	--	--	--	--	--	--	42.8
2010	--	--	--	--	--	--	48.9
2011	--	--	--	--	--	--	38.9
2012	--	--	--	--	--	--	25.7
2013	--	--	--	--	--	--	15.5
2014	--	--	--	--	--	--	5.3
2015	--	--	--	--	--	--	0.3
Subtotal	--	--	--	--	--	--	723.8

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 1998 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1997	--	--	--	--	--	--	6.9
1998	--	--	--	--	--	--	29.5
1999	--	--	--	--	--	--	36.2
2000	--	--	--	--	--	--	41.0
2001	--	--	--	--	--	--	29.1
2002	--	--	--	--	--	--	47.5
2003	--	--	--	--	--	--	22.5
2004	--	--	--	--	--	--	45.2
2005	--	--	--	--	--	--	68.9
2006	--	--	--	--	--	--	67.5
2007	--	--	--	--	--	--	68.0
2008	--	--	--	--	--	--	31.3
2009	--	--	--	--	--	--	34.8
2010	--	--	--	--	--	--	39.3
2011	--	--	--	--	--	--	30.8
2012	--	--	--	--	--	--	20.0
2013	--	--	--	--	--	--	11.9
2014	--	--	--	--	--	--	4.0
2015	--	--	--	--	--	--	0.2
Subtotal	--	--	--	--	--	--	634.6

Annual Funding 1506 Procurement Aircraft Procurement, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1998	1	16.3	--	11.3	27.6	2.1	29.7
1999	5	109.7	--	--	109.7	28.0	137.7
2000	16	298.1	--	--	298.1	63.4	361.5
2001	15	218.8	--	6.3	225.1	94.3	319.4
2002	13	188.7	--	13.4	202.1	70.6	272.7
2003	15	251.2	--	37.3	288.5	75.5	364.0
2004	13	221.0	--	70.5	291.5	135.2	426.7
2005	15	258.0	--	61.2	319.2	79.4	398.6
2006	26	391.3	--	78.3	469.6	67.6	537.2
2007	18	318.1	--	36.8	354.9	125.9	480.8
2008	20	332.7	--	140.6	473.3	101.9	575.2
2009	20	357.8	--	158.0	515.8	78.2	594.0
2010	18	326.8	--	87.8	414.6	58.5	473.1
2011	18	322.6	--	171.5	494.1	55.8	549.9
2012	18	352.5	--	89.7	442.2	46.1	488.3
2013	18	353.0	--	63.9	416.9	43.5	460.4
2014	18	321.1	--	105.9	427.0	41.7	468.7
2015	8	132.4	--	114.2	246.6	37.1	283.7
2016	--	--	--	--	--	30.3	30.3
Subtotal	275	4770.1	--	1246.7	6016.8	1235.1	7251.9

Annual Funding 1506 Procurement Aircraft Procurement, Navy							
Fiscal Year	Quantity	BY 1998 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1998	1	16.0	--	11.1	27.1	2.1	29.2
1999	5	106.4	--	--	106.4	27.2	133.6
2000	16	285.4	--	--	285.4	60.7	346.1
2001	15	207.0	--	6.0	213.0	89.2	302.2
2002	13	176.3	--	12.5	188.8	66.0	254.8
2003	15	230.1	--	34.2	264.3	69.2	333.5
2004	13	197.3	--	62.9	260.2	120.7	380.9
2005	15	224.0	--	53.1	277.1	69.0	346.1
2006	26	330.6	--	66.1	396.7	57.1	453.8
2007	18	262.7	--	30.4	293.1	103.9	397.0
2008	20	270.9	--	114.4	385.3	83.0	468.3
2009	20	287.9	--	127.2	415.1	62.9	478.0
2010	18	259.6	--	69.7	329.3	46.5	375.8
2011	18	252.3	--	134.2	386.5	43.6	430.1
2012	18	271.1	--	69.0	340.1	35.5	375.6
2013	18	267.0	--	48.3	315.3	32.9	348.2
2014	18	238.8	--	78.7	317.5	31.0	348.5
2015	8	96.8	--	83.5	180.3	27.1	207.4
2016	--	--	--	--	--	21.8	21.8
Subtotal	275	3980.2	--	1001.3	4981.5	1049.4	6030.9

Cost Quantity Information		
1506 Procurement Aircraft Procurement, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 1998 \$M
1998	1	16.0
1999	5	81.5
2000	16	237.5
2001	15	213.1
2002	13	178.6
2003	15	223.8
2004	13	186.5
2005	15	216.9
2006	26	348.8
2007	18	261.0
2008	20	282.7
2009	20	284.8
2010	18	260.7
2011	18	259.9
2012	18	271.8
2013	18	269.8
2014	18	263.0
2015	8	123.8
2016	--	--
Subtotal	275	3980.2

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	7/8/1998	7/8/1998
Approved Quantity	37	37
Reference	ADM	ADM
Start Year	1998	1998
End Year	2001	2001

The Low Rate Initial Production (LRIP) quantity of 37 aircraft was set at the Milestone II decision on July 8, 1998, which was 15% of the total procurement. The LRIP was appropriate due to the low risk of integrating Navy H-60 Seahawk components into the Army H-60 Blackhawk as well as allowing use of an existing Army multi-year contract for procurement.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Description
Thailand	3/29/2007	2	57.9	Total Cost based on Letter of Offer and Acceptance (LOA) signed March 27, 2007. Deliveries projected to be complete January 2011.

Notes

Nuclear Costs

None

Unit Cost

Unit Cost Report

Item	BY 1998 \$M	BY 1998 \$M	% Change
	Current UCR Baseline (May 2005 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	6603.9	6665.5	
Quantity	271	275	
Unit Cost	24.369	24.238	-0.54
Average Procurement Unit Cost			
Cost	6062.0	6030.9	
Quantity	271	275	
Unit Cost	22.369	21.931	-1.96

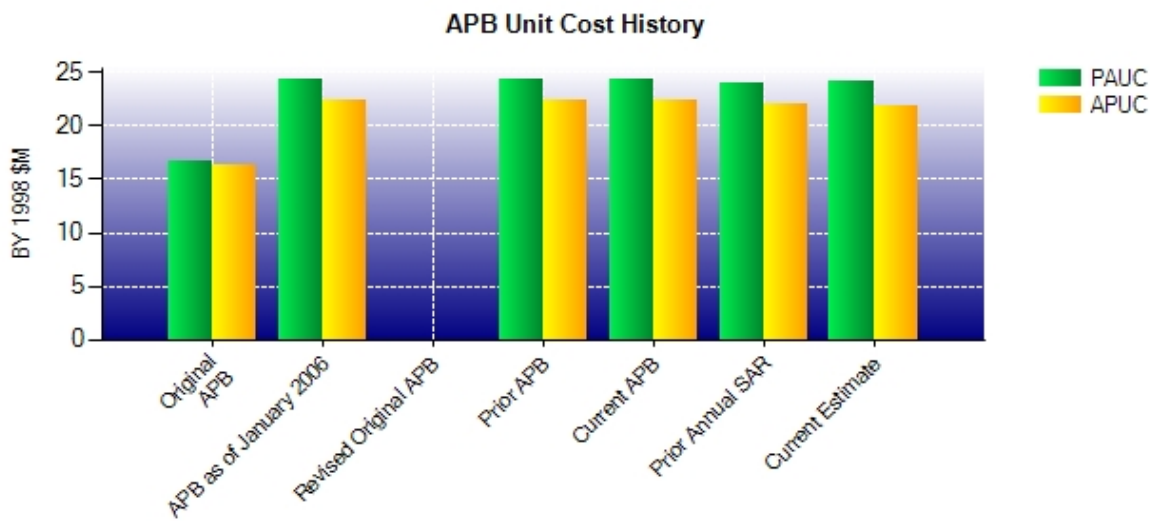
Item	BY 1998 \$M	BY 1998 \$M	% Change
	Original UCR Baseline (Jul 1998 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	2769.0	6665.5	
Quantity	166	275	
Unit Cost	16.681	24.238	+45.30¹
Average Procurement Unit Cost			
Cost	2698.0	6030.9	
Quantity	165	275	
Unit Cost	16.352	21.931	+34.12¹

¹ Nunn-McCurdy Breach

This program reflects a significant Nunn-McCurdy breach to the original baseline that was first reported in the December 2005 SAR. The supporting breach information and explanations can be found in the Unit Cost Report section of that SAR.

The MH-60S program baseline was not reset in 2006 when the Nunn-McCurdy law was changed to report cost growth against the original baseline in addition to the current baseline. At the time the PAUC was below the 50% growth threshold, and therefore did not allow for re-baselining.

Unit Cost History



Item	Date	BY 1998 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jul 1998	16.681	16.352	19.567	19.334
APB as of January 2006	May 2005	24.369	22.369	28.489	26.328
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	May 2005	24.369	22.369	28.489	26.328
Current APB	Dec 2008	24.369	22.369	28.489	26.328
Prior Annual SAR	Dec 2007	24.001	21.969	28.941	26.660
Current Estimate	Dec 2009	24.238	21.931	29.003	26.371

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
19.000	-0.766	-0.164	-0.001	2.211	3.739	0.000	1.693	6.712	25.712

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
25.712	0.509	-0.750	0.825	-0.129	1.798	0.000	1.038	3.291	29.003

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
18.679	-0.765	-0.147	-0.001	1.123	3.352	0.000	1.693	5.255	23.934

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
23.934	0.485	-0.505	0.825	-0.188	0.782	0.000	1.038	2.437	26.371

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	Apr 1998	Jul 1998	Jul 1998
Milestone III	N/A	Sep 2000	Aug 2002	Aug 2002
IOC	N/A	Dec 2001	Aug 2002	Aug 2002
Total Cost (TY \$M)	N/A	3154.0	6093.8	7975.7
Total Quantity	N/A	166	237	275
PAUC	N/A	19.000	25.712	29.003

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	421.4	5672.4	--	6093.8
Previous Changes				
Economic	+7.3	+208.1	--	+215.4
Quantity	--	+690.3	--	+690.3
Schedule	--	+242.6	--	+242.6
Engineering	+5.0	-51.0	--	-46.0
Estimating	+184.4	+119.4	--	+303.8
Other	--	--	--	--
Support	--	+343.1	--	+343.1
Subtotal	+196.7	+1552.5	--	+1749.2
Current Changes				
Economic	-0.5	-74.8	--	-75.3
Quantity	--	+80.1	--	+80.1
Schedule	--	-15.6	--	-15.6
Engineering	+11.2	-0.6	--	+10.6
Estimating	+95.0	+95.6	--	+190.6
Other	--	--	--	--
Support	--	-57.7	--	-57.7
Subtotal	+105.7	+27.0	--	+132.7
Total Changes	+302.4	+1579.5	--	+1881.9
Current Estimate	723.8	7251.9	--	7975.7

Summary BY 1998 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	390.9	4879.2	--	5270.1
Previous Changes				
Economic	--	--	--	--
Quantity	--	+514.0	--	+514.0
Schedule	--	+128.2	--	+128.2
Engineering	+4.3	-40.9	--	-36.6
Estimating	+155.4	+230.0	--	+385.4
Other	--	--	--	--
Support	--	+243.1	--	+243.1
Subtotal	+159.7	+1074.4	--	+1234.1
Current Changes				
Economic	--	--	--	--
Quantity	--	+58.5	--	+58.5
Schedule	--	-6.4	--	-6.4
Engineering	+9.0	-0.4	--	+8.6
Estimating	+75.0	+67.9	--	+142.9
Other	--	--	--	--
Support	--	-42.3	--	-42.3
Subtotal	+84.0	+77.3	--	+161.3
Total Changes	+243.7	+1151.7	--	+1395.4
Current Estimate	634.6	6030.9	--	6665.5

Previous Estimate: June 2008

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.5
Adjustment for current and prior escalation. (Estimating)	+0.1	+0.2
Increase for added capability for Anti-Swarm/Forward Firing Weapons integration. (Engineering)	+9.0	+11.2
Refinement of Airborne Mine Countermeasures (AMCM) cost estimate due to integration and sensor development issues. (Estimating)	+74.6	+94.4
Refinement of Cost estimate for integration of Rockets/Forward Firing Weapons. (Estimating)	+0.3	+0.4
RDT&E Subtotal	+84.0	+105.7

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-74.8
Quantity variance resulting from an increase of 4 aircraft from 271 to 275. (Quantity)	+57.9	+79.2
Additional Quantity Variance associated with an increase in aircraft from 271 to 275 (Quantity)	+0.6	+0.9
Schedule Variance resulting from rephasing of 4 aircraft into FY08 and FY09. (Schedule)	0.0	-7.5
Additional Schedule Variance resulting from rephasing of 4 aircraft into FY08 and FY09. (Schedule)	-6.4	-8.1
Adjustment for current and prior escalation. (Estimating)	+9.5	+12.1
Decrease in engineering costs due to incorporation of multiple Engineering Change Proposals. (Engineering)	-0.4	-0.6
Decrease in revised cost estimate for Government Furnished Equipment (GFE) requirements and prior year actuals. (Estimating)	-17.4	-21.1
Increase due to revised cost estimate for follow-on airframe Multi-year contract and updated actual costs due to Engineering Change Proposal incorporations. (Estimating)	+9.1	+12.0
Decrease in revised cost estimate for Lockheed Martin Common Cockpit costs and re-phasing of associated contract Advance Procurement. (Estimating)	-8.3	-10.7
Increase in revised cost estimate for Ancillary kits due to quantity rephasing and updated actual costs. (Estimating)	+25.8	+39.2
Increase in revised cost estimate to update Non-recurring Engineering costs for Common Cockpit obsolescence, Joint Mission Planning System, and other Engineering Change Proposals. (Estimating)	+29.0	+36.4
Increase in revised cost estimate for Production Line Shutdown costs. (Estimating)	+20.2	+27.7
Adjustment for current and prior escalation. (Support)	+1.6	+1.8
Decrease in Other Support. (Support)	-48.7	-65.4
Increase in Initial Spares due to refinement of cost estimate. (Support)	+4.8	+5.9
Procurement Subtotal	+77.3	+27.0

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: AMCM BLK 2B
Contractor: Sikorsky Aircraft Corp
Contractor Location: Stratford, CT 06615
Contract Number: N00019-03-G-0003/30
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: February 17, 2005
Definitization Date: December 08, 2005

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
60.6	N/A	N/A	55.9	N/A	N/A	55.9	55.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance			
Item	Cost Variance		Schedule Variance
Cumulative Variances To Date (11/30/2009)	+0.6		-3.6
Previous Cumulative Variances	+1.0		-3.4
Net Change	-0.4		-0.2

Cost and Schedule Variance Explanations

General Contract Variance Explanation

The net unfavorable cost variance of \$.4M can be attributed to increased costs and requirements for the Airframe effort.

The net unfavorable schedule variance of \$.2M was due to delays of Rapid Airborne Mine Clearance System (RAMICS) and Organic Airborne and Surface Mine Influence Sweep (OASIS) testing.

Notes

A successful Integrated Baseline Review (IBR) was conducted May 3, 2006. The EVM data reflects Nov 2009 Cost Performance Report.

The Contract Target Price decreased based on contract scope being moved to a follow-on contract.

This contract is over 90% complete and will no longer be reported.

Contract Identification

Appropriation: Procurement
Contract Name: Common Cockpit Multiyear
Contractor: Lockheed Martin Mission Systems & Sensors
Contractor Location: Owego, NY 13827
Contract Number: N00019-04-C-0028
Contract Type: Firm Fixed Price (FFP)
Award Date: December 29, 2003
Definitization Date: December 29, 2003

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
237.5	N/A	141	237.5	N/A	141	237.5	237.5

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Contract Identification

Appropriation: Procurement
Contract Name: AMCM BLK 2B
Contractor: Lockheed Martin Mission Systems & Sensors
Contractor Location: Owego, NY 13827
Contract Number: N00019-05-C-0048
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: January 12, 2005
Definitization Date: October 26, 2005

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
76.6	N/A	N/A	70.4	N/A	N/A	70.4	70.4

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (9/25/2009)	-2.1	-0.5
Previous Cumulative Variances	+0.5	-0.5
Net Change	-2.6	+0.0

Cost and Schedule Variance Explanations**General Contract Variance Explanation**

The net unfavorable cost variance of \$2.6M is due to cost growth in Software Development.

Notes

A successful Integrated Baseline Review (IBR) was conducted on February 14-15, 2006. The EVM data reflects September 2009 Cost Performance Report.

In November 2009 the Government concurred with Lockheed Martin Mission Systems & Sensors request to be excused from providing monthly Earned Value Management System reports.

The Contract Target Price decreased based on contract scope being moved to a follow-on contract.

This contract is more than 90% complete and will no longer be reported.

Contract Identification

Appropriation: RDT&E
Contract Name: LMSI P3/Link 16
Contractor: Lockheed Martin Mission Systems & Sensors
Contractor Location: Owego, NY 13827
Contract Number: N00019-05-C-0076
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: August 29, 2005
Definitization Date: August 29, 2005

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
89.0	N/A	N/A	112.7	N/A	N/A	112.7	112.7

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (3/27/2009)	+1.3	-0.1
Previous Cumulative Variances	-6.1	-1.1
Net Change	+7.4	+1.0

Cost and Schedule Variance Explanations**General Contract Variance Explanation**

The net favorable cost and schedule variance of \$7.4M and \$1.0M, respectively, was due to scope growth for the MH-60R Joint Mission Planning System (JMPS) Integration.

Notes

LMSI P3/Link 16 is a joint contract between MH-60R and MH-60S. Contract includes both MH-60S and MH-60R effort and funding. The Integrated Baseline Review (IBR) was conducted February 28 through March 2, 2006.

The Contract Target Price increased based on scope growth for the MH-60R JMPS Integration.

This contract is 100% complete, in the final stages of close out and will no longer be reported.

Contract Identification

Appropriation: Procurement
Contract Name: Common Cockpit Follow On
Contractor: Lockheed Martin Mission Systems & Sensors
Contractor Location: Owego, NY 13827
Contract Number: N00019-06-C-0098
Contract Type: Firm Fixed Price (FFP)
Award Date: December 30, 2009
Definitization Date: December 30, 2009

Contract Price								
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
76.6	N/A	36	76.6	N/A	36	76.6	76.6	

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: MH-60S Prod MY Contract Lots IX-XIII
Contractor: Sikorsky Aircraft Corporation
Contractor Location: Stratford, CT 06615
Contract Number: W58RGZ-08-C-0003
Contract Type: Firm Fixed Price (FFP)
Award Date: December 12, 2007
Definitization Date: December 12, 2007

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1229.0	N/A	90	1301.0	N/A	94	1301.0	1301.0

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

The Contract Target Price increased based on an aircraft quantity increase after initial contract award.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	157	158	275	57.45%
Total Program Quantity Delivered	157	158	275	57.45%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	7975.7	Years Appropriated	14
Expended to Date	4096.2	Percent Years Appropriated	70.00%
Percent Expended	51.36%	Appropriated to Date	5608.7
Total Funding Years	20	Percent Appropriated	70.32%

Deliveries and expenditures reported as of 31 December 2009

Operating and Support Cost

Assumptions and Ground Rules

Estimate Duration = Fiscal Years 2001-2034
MH-60S Fatigue Life = 10,000 hours or approximately 22 years
Aircraft Attrition Rate = 0.8%
Aircraft Pipeline Rate = 15% of Total Aircraft Inventory (TAI)
Total Procured MH-60S aircraft = 275 (3 already stricken)
Average flight hours per month per aircraft = 41.67
Total Operating Aircraft Years = 4494

The MH-60S Milestone III estimate was updated with aircraft quantity changes in January 2009. Costs are expressed in terms of cost per aircraft per year using the Milestone III O&S estimate with Armed Helicopter and Airborne Mine Counter Measures (AMCM) estimated costs included. The Base Year total was calculated multiplying the dollar per aircraft cost by the total number of aircraft years of the O&S cycle. Changes to this SAR that differ from the last report are: a phased approach estimate to include the ramp-up of aircraft as they are introduced to the fleet through the retirement of MH-60S aircraft from service and an increase in aircraft quantity from 271 to 275. The previous SAR was based on all 271 aircraft operating at full capacity for the entire O&S cycle (34 years). (1.0) Mission Personnel Pay & Allowances was updated to reflect current squadron manning documents. (2.0) Unit Level Consumption has Aviation Depot Level Repairables (AVDLR) and Aviation Fleet Maintenance (AFM) annual cost growth above inflation inserted, where the previous estimate did not.

The antecedent system is the HH-60H aircraft. All costs are from the FY08 Navy Visibility & Management of Operating & Support Costs (VAMOSC) Aviation Type Model Series Report (ATMSR) database and the FY08 Aircraft Program Data File (APDF) Primary Authorized Aircraft (PAA). ATMSR (1.0) Mission Personnel Pay & Allowances and (3.0) Intermediate Maintenance data was adjusted to account for composite pay rate burdening deficiencies. (7.0) Indirect Support is a function of Mission Personnel Support and Intermediate Maintenance Personnel Support costs.

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY1998 \$M			
Cost Element	MH-60S		HH-60H (Antecedent)
	Average Annual Cost Per Aircraft		Average Annual Cost Per Aircraft
Mission Pay & Allowance	2.040		1.990
Unit Level Consumption	1.320		1.500
Intermediate Maintenance	0.270		0.350
Depot Maintenance	0.160		0.360
Contractor Support	0.020		0.000
Sustaining Support	0.140		0.180
Indirect	0.400		0.410
Other	--		--
Total	4.350		4.790

Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	MH-60S			HH-60H (Antecedent)
	Current Production APB Objective/Threshold	Current Estimate		
Base Year	14424.9	15867.4	19549.0¹	N/A
Then Year	0.0	N/A	33808.0	N/A

¹ APB O&S Cost BreachTotal O&S Cost Comment

None

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 1998 \$M):