



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-191



MH-60R Multi-Mission Helicopter (MH-60R)

As of FY 2011 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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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-60R Multi-Mission Helicopter (MH-60R)

DoD Component

Navy

Responsible Office

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References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 22, 2006

Approved APB

NAE Approved Acquisition Program Baseline (APB) dated September 7, 2008

Mission and Description

The MH-60R primary mission areas include Anti-Submarine Warfare (ASW) and Surface Warfare (SUW). Secondary mission areas include Search and Rescue (SAR), Vertical Replenishment (VERTREP), Naval Surface Fire Support (NSFS), logistics support, personnel transport, Medical Evacuation (MEDEVAC), and VHF/UHF/Link Communication Relay (COMREL). The MH-60R is the central component of the "Navy Helicopter Master Plan" and the Chief of Naval Operations (CNO) approved Helicopter Concept of Operations (CONOPS) that replaces the aging SH-60B and SH-60F helicopters.

The avionics upgrades over the existing SH-60B/F include: a glass cockpit common with the MH-60S; Airborne Low Frequency Sonar (ALFS) as a long range active dipping sonar; Electronic Support Measures (ESM) with expanded frequency coverage and location detection; Multi-Mode Radar (MMR) with long range search, periscope detection, and imaging Inverse Synthetic Aperature Radar (ISAR); Forward Looking Infra-Red (FLIR) for imaging and laser target designation; Acoustic Processor (AP) for processing for ALFS and sonobuoys; Integrated Self Defense (ISD); and the Mission Planning System (MPS). MH-60R sensors and real-time exchange of tactical data with the host ship will bring a new dimension of battle space control to the Naval Commander.

Executive Summary

The MH-60R production was placed on Multi-Year Procurement (MYP) contracts in 2007. A MYP contract (FY07-11) for Lots 5-9 was awarded to Lockheed Martin Systems Integration (LMSI) on August 16, 2007 for production of the MH-60R Mission Avionics Systems and associated integration efforts, and a joint Army/Navy MYP contract for (FY07-11) for Lots 5-9 was awarded to Sikorsky Aircraft Corporation (SAC) on December 12, 2007 for production of the MH-60R Air Vehicle.

The MH-60R total program quantity has increased by 46 aircraft. In Fiscal Year (FY) 08 funding was received for procurement of two aircraft in support of Overseas Contingency Operations (OCO), and an additional 44 aircraft were added in FY11 President's Budget in support of Littoral Combat Ship (LCS) operations. As a result of the recent 44 aircraft increase, the MH-60R has deviated from its current approved baseline and breached its total procurement cost. A Program Deviation Report (PDR) was submitted to the Navy Service Acquisition Executive (SAE) to initiate a new procurement baseline.

A total of 48 MH-60R aircraft have been delivered to the Fleet as of December 2009. The first MH-60R operational squadron was established in October 2007 and returned from a successful deployment in July 2009. Fleet feedback on the MH-60R was very positive. In February 2009, the second MH-60R operational squadron was formally established. In addition, the third MH-60R operational squadron transitioned from SH-60Bs to MH-60Rs in January 2009. Full Rate Production (FRP) deliveries to the Fleet continue on-track in support of additional squadron stand-ups and transitions.

A production contract was awarded to Raytheon Company, Portsmouth, RI for the Lot 6 procurement of the Airborne Low Frequency Sonar (ALFS) systems on April 29, 2008 and the Lot 7 procurement was awarded on September 22, 2009.

A System Development and Demonstration (SDD) contract was awarded to LMSI, Owego, NY on June 26, 2008 for the development, integration, and test of the Automatic Radar Periscope Detection and Discrimination (ARPDD) capability into the AN/APS-147 Multi-Mode Radar (MMR).

A competitive procurement contract was awarded to L3 Communications Corporation, Salt Lake, City, UT on June 12, 2009 for Full Rate Production (FRP) of the Common Data Link (CDL) Hawklink in FY09, with options for FY10 and FY11.

There are no significant software-related issues on this program at this time.

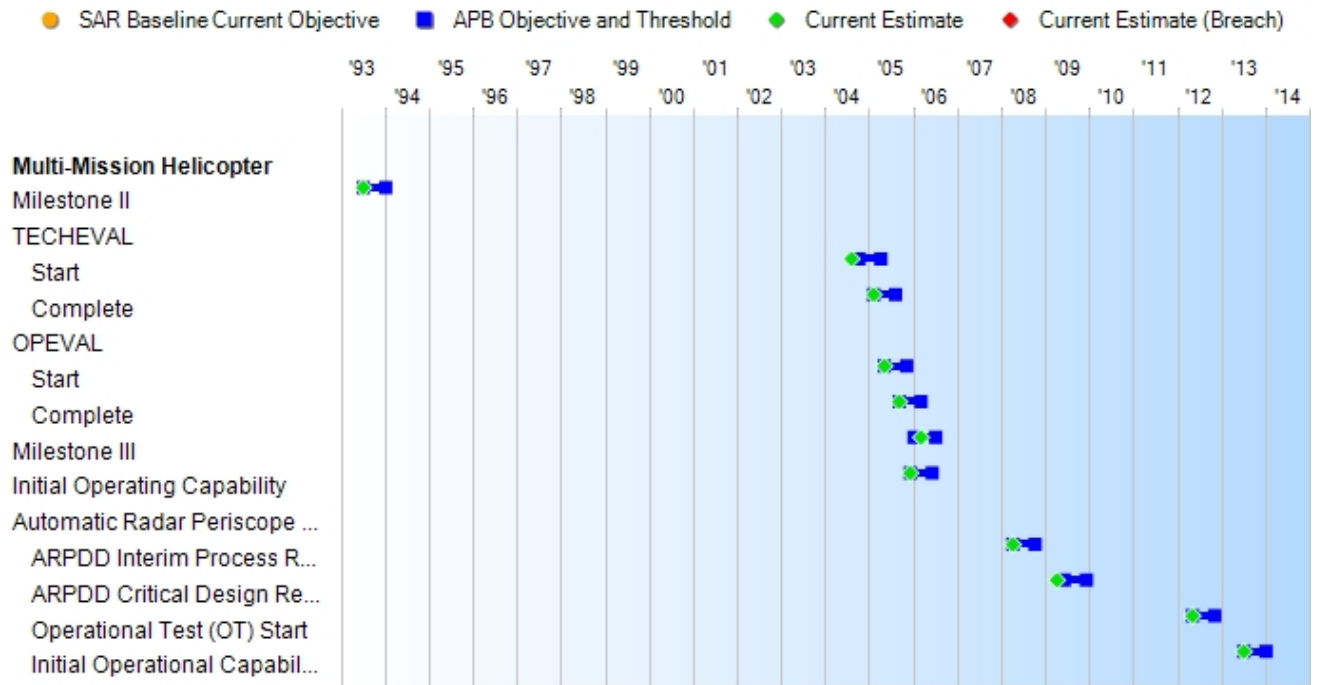
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Threshold Breaches

APB Breaches		Explanation of Breach
Schedule	<input type="checkbox"/>	The MH-60R program total quantity increase of 46 aircraft were added to the program of record. In FY08, two aircraft were added in support of Overseas Contingency Operations (OCO). Additionally, Fiscal Year (FY) 11 President's Budget added 44 aircraft in support of Littoral Combat Ship (LCS) operations. The addition of the 44 aircraft caused the MH-60R program to breach its current procurement cost threshold. A Program Deviation Report (PDR) was submitted to the Navy Service Acquisition Executive (SAE).
Performance	<input type="checkbox"/>	
Cost	<input type="checkbox"/>	
RDT&E	<input type="checkbox"/>	
Procurement	<input checked="" 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	None
APUC	None

Schedule



Schedule Events					
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	
Milestone II	Jul 1993	Jul 1993	Jan 1994	Jul 1993	
TECHEVAL					
Start	Oct 2004	Oct 2004	Apr 2005	Aug 2004	
Complete	Feb 2005	Feb 2005	Aug 2005	Feb 2005	
OPEVAL					
Start	May 2005	May 2005	Nov 2005	May 2005	
Complete	Sep 2005	Sep 2005	Mar 2006	Sep 2005	
Milestone III	Jan 2006	Jan 2006	Jul 2006	Mar 2006	
Initial Operating Capability	Dec 2005	Dec 2005	Jun 2006	Dec 2005	
Automatic Radar Periscope Detection and Discriminator (ARPDD)					
ARPDD Interim Process Review (IPR) (System Design Development (SDD) Award)	N/A	Apr 2008	Oct 2008	Apr 2008	(Ch-1)
ARPDD Critical Design Review (CDR)	N/A	Jun 2009	Dec 2009	Apr 2009	(Ch-1)
Operational Test (OT) Start	N/A	May 2012	Nov 2012	May 2012	(Ch-1)
Initial Operational Capability (IOC)	N/A	Jul 2013	Jan 2014	Jul 2013	(Ch-1)

Change Explanations

(Ch-1) The Automatic Radar Periscope Detection and Discriminator (ARPDD) milestones were added to the Acquisition Program Baseline (APB) dated September 7, 2008.

Acronyms and Abbreviations

OPEVAL - Operational Evaluation
TECHEVAL - Technical Evaluation

Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Availability (%): Mission Capable				
82	82	70	82.3%	82%
Net Ready: All interfaces, services, policy-enforcement, controls, and data-sharing of the NCOWRM and GIG-KIPs will be satisfied to the requirements of the specific Joint integrated architecture products (including data correctness, data availability, and data processing), and information assurance accreditation specified in the threshold and objective values.				
100% of requirements	100% of requirements	100% of enterprise - level or critical requirements	TBD	100% of enterprise - level or critical requirements
Crew Protection: Crashworthiness, Crew Restraint, and Egress				
Crew Seating 35/25/20G, Passenger 20/20/20	Crew Seating 35/25/20G, Passenger 20/20/20	Crew Seating 20/20/20G, Passenger 14/13/12G	TBD	Crew Seating 20/20/20G, Passenger 14/13/12G

Classified Performance information is provided in the classified annex to this submission.

Requirements Reference

Capability Production Document (CPD) dated November 28, 2005

Change Explanations

None

Track to Budget

RDT&E

Appn	BA	PE
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Navy 1319 05 0604212N

Project	Name
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2412 ASW & OTHER HELO DEVELOPMENT/MH-60R LAMPS

H2412 ASW & OTHER HELO DEVELOPMENT/MH-60R LAMPS

Navy 1319 05 0604216N

Project	Name
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1707 MULTI-MISSION HELO UPGRADE DEVELOPMENT/MH-60R

H9215 MULTI-MISSION HELO UPGRADE DEVELOPMENT/MH-60 PMLCC

Procurement

Appn	BA	PE
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Navy 1506 01 0204243N

Line Item	Name
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0182 MH-60R

018200 MH-60R

Navy 1506 06 0204243N

Line Item	Name
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0605

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2006 \$M			BY 2006 \$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	1519.0	1718.9	1890.8	1810.3	1375.7	1570.4	1667.8
Procurement	9108.0	9108.0	10018.8	11359.8 ¹	10049.0	10049.0	12573.2
Flyaway	--	--	--	9721.1	--	--	10807.1
Recurring	--	--	--	8415.7	--	--	9374.0
Non Recurring	--	--	--	1305.4	--	--	1433.1
Support	--	--	--	1638.7	--	--	1766.1
Other Support	--	--	--	1382.2	--	--	1498.7
Initial Spares	--	--	--	256.5	--	--	267.4
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	10627.0	10826.9	N/A	13170.1	11424.7	11619.4	14241.0

¹ APB Breach

Cost Notes

The MH-60R program total quantity increase of 46 aircraft consisted of two FY08 aircraft in support of Overseas Contingency Operations (OCO), and in Fiscal Year (FY) 11 President's Budget, 44 additional aircraft were added to the program of record in support of Littoral Combat Ship (LCS) operations. The addition of the 44 aircraft caused the MH-60R program to breach its current procurement cost threshold.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	2	2	2
Procurement	252	252	298
Total	254	254	300

Quantity Notes

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	1522.0	71.5	55.8	15.2	3.3	0.0	0.0	0.0	1667.8
Procurement	5038.5	933.5	1105.2	1031.1	1011.6	1238.6	1268.4	946.3	12573.2
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	6560.5	1005.0	1161.0	1046.3	1014.9	1238.6	1268.4	946.3	14241.0
PB 2009 Total	6471.7	1096.1	1173.5	996.7	1011.4	941.3	392.2	56.5	12139.4
Delta	88.8	-91.1	-12.5	49.6	3.5	297.3	876.2	889.8	2101.6

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	2	0	0	0	0	0	0	0	0	2
Production	0	110	24	24	24	24	30	36	26	298
PB 2011 Total	2	110	24	24	24	24	30	36	26	300
PB 2009 Total	2	109	27	28	25	27	27	9	0	254
Delta	0	1	-3	-4	-1	-3	3	27	26	46

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
1990	--	--	--	--	--	--	10.2
1991	--	--	--	--	--	--	28.5
1992	--	--	--	--	--	--	53.0
1993	--	--	--	--	--	--	72.7
1994	--	--	--	--	--	--	70.7
1995	--	--	--	--	--	--	70.0
1996	--	--	--	--	--	--	65.1
1997	--	--	--	--	--	--	55.2
1998	--	--	--	--	--	--	85.3
1999	--	--	--	--	--	--	209.0
2000	--	--	--	--	--	--	110.1
2001	--	--	--	--	--	--	77.8
2002	--	--	--	--	--	--	133.7
2003	--	--	--	--	--	--	89.9
2004	--	--	--	--	--	--	81.9
2005	--	--	--	--	--	--	80.1
2006	--	--	--	--	--	--	57.8
2007	--	--	--	--	--	--	28.9
2008	--	--	--	--	--	--	74.2
2009	--	--	--	--	--	--	67.9
2010	--	--	--	--	--	--	71.5
2011	--	--	--	--	--	--	55.8
2012	--	--	--	--	--	--	15.2
2013	--	--	--	--	--	--	3.3
Subtotal	2	--	--	--	--	--	1667.8

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2006 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1990	--	--	--	--	--	--	13.7
1991	--	--	--	--	--	--	36.8
1992	--	--	--	--	--	--	66.6
1993	--	--	--	--	--	--	89.2
1994	--	--	--	--	--	--	85.2
1995	--	--	--	--	--	--	82.7
1996	--	--	--	--	--	--	75.7
1997	--	--	--	--	--	--	63.4
1998	--	--	--	--	--	--	97.1
1999	--	--	--	--	--	--	235.3
2000	--	--	--	--	--	--	122.1
2001	--	--	--	--	--	--	85.1
2002	--	--	--	--	--	--	144.9
2003	--	--	--	--	--	--	96.0
2004	--	--	--	--	--	--	85.1
2005	--	--	--	--	--	--	81.1
2006	--	--	--	--	--	--	56.7
2007	--	--	--	--	--	--	27.7
2008	--	--	--	--	--	--	69.8
2009	--	--	--	--	--	--	63.2
2010	--	--	--	--	--	--	65.8
2011	--	--	--	--	--	--	50.6
2012	--	--	--	--	--	--	13.6
2013	--	--	--	--	--	--	2.9
Subtotal	2	--	--	--	--	--	1810.3

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	
2000	5	175.9	--	25.8	201.7	35.3	237.0	
2001	--	--	--	44.7	44.7	7.3	52.0	
2002	--	--	--	11.2	11.2	3.8	15.0	
2003	--	32.5	--	36.5	69.0	52.4	121.4	
2004	4	168.4	--	68.4	236.8	108.7	345.5	
2005	6	204.0	--	71.4	275.4	155.4	430.8	
2006	12	394.8	--	58.2	453.0	204.0	657.0	
2007	25	726.7	--	71.5	798.2	130.1	928.3	
2008	28	864.8	--	95.8	960.6	118.0	1078.6	
2009	30	909.5	--	112.2	1021.7	151.2	1172.9	
2010	24	696.5	--	92.6	789.1	144.4	933.5	
2011	24	771.3	--	108.9	880.2	225.0	1105.2	
2012	24	828.1	--	97.7	925.8	105.3	1031.1	
2013	24	863.5	--	90.9	954.4	57.2	1011.6	
2014	30	1046.4	--	134.8	1181.2	57.4	1238.6	
2015	36	1040.1	--	173.1	1213.2	55.2	1268.4	
2016	26	651.5	--	139.4	790.9	95.5	886.4	
2017	--	--	--	--	--	59.9	59.9	
Subtotal	298	9374.0	--	1433.1	10807.1	1766.1	12573.2	

Annual Funding 1506 Procurement Aircraft Procurement, Navy							
Fiscal Year	Quantity	BY 2006 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2000	5	192.9	--	28.3	221.2	38.7	259.9
2001	--	--	--	48.4	48.4	7.9	56.3
2002	--	--	--	12.0	12.0	4.1	16.1
2003	--	34.1	--	38.3	72.4	55.0	127.4
2004	4	172.1	--	69.9	242.0	111.2	353.2
2005	6	202.8	--	71.0	273.8	154.5	428.3
2006	12	382.0	--	56.3	438.3	197.3	635.6
2007	25	687.2	--	67.6	754.8	123.1	877.9
2008	28	806.3	--	89.3	895.6	110.0	1005.6
2009	30	838.2	--	103.4	941.6	139.3	1080.9
2010	24	633.6	--	84.2	717.8	131.4	849.2
2011	24	690.8	--	97.5	788.3	201.6	989.9
2012	24	729.4	--	86.0	815.4	92.8	908.2
2013	24	747.9	--	78.6	826.5	49.6	876.1
2014	30	891.1	--	114.8	1005.9	48.9	1054.8
2015	36	870.9	--	145.0	1015.9	46.2	1062.1
2016	26	536.4	--	114.8	651.2	78.6	729.8
2017	--	--	--	--	--	48.5	48.5
Subtotal	298	8415.7	--	1305.4	9721.1	1638.7	11359.8

Cost Quantity Information		
1506 Procurement Aircraft Procurement, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2006 \$M
2000	5	192.9
2001	--	--
2002	--	--
2003	--	--
2004	4	169.2
2005	6	170.6
2006	12	326.7
2007	25	698.1
2008	28	778.3
2009	30	844.9
2010	24	661.1
2011	24	653.0
2012	24	718.1
2013	24	709.9
2014	30	861.6
2015	36	1001.5
2016	26	629.8
2017	--	--
Subtotal	298	8415.7

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	5/10/1999	4/5/2005
Approved Quantity	21	15
Reference	ADM	ADM
Start Year	2002	2002
End Year	2007	2007

In May 1999, Low Rate Initial Production (LRIP) was approved by Assistant Secretary of The Navy (ASN) Research, Development and Acquisition (RD&A) for a total LRIP quantity of 21, which was 8.6% of the total procurement (243). In April 2005, an Acquisition Decision Memorandum was approved to reduce the LRIP quantity from 21 to 15 which was 5.0% of the total procurement (298). Program is now in Full Rate Production (FRP).

Foreign Military Sales

Notes

None.

Nuclear Costs

None.

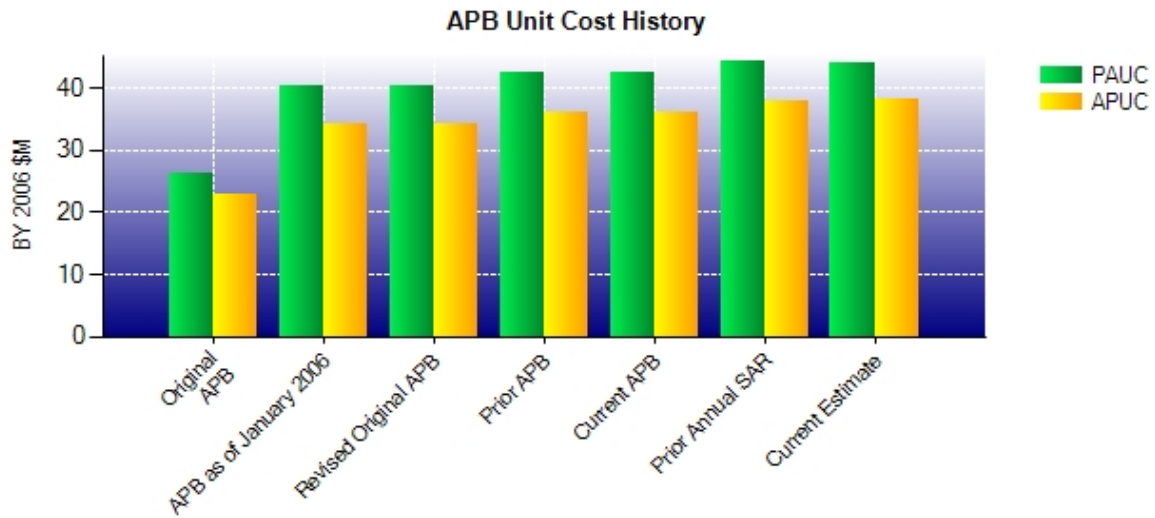
Unit Cost

Unit Cost Report

Item	BY 2006 \$M	BY 2006 \$M	% Change
	Current UCR Baseline (Sep 2008 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	10826.9	13170.1	
Quantity	254	300	
Unit Cost	42.626	43.900	+2.99
Average Procurement Unit Cost			
Cost	9108.0	11359.8	
Quantity	252	298	
Unit Cost	36.143	38.120	+5.47

Item	BY 2006 \$M	BY 2006 \$M	% Change
	Revised Original UCR Baseline (May 2004 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	9894.9	13170.1	
Quantity	243	300	
Unit Cost	40.720	43.900	+7.81
Average Procurement Unit Cost			
Cost	8361.1	11359.8	
Quantity	241	298	
Unit Cost	34.693	38.120	+9.88

Unit Cost History



Item	Date	BY 2006 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jun 1995	26.155	22.846	29.981	27.062
APB as of January 2006	May 2004	40.207	34.254	41.427	36.090
Revised Original APB	May 2004	40.207	34.254	41.427	36.090
Prior APB	Mar 2007	42.626	36.143	45.746	39.877
Current APB	Sep 2008	42.626	36.143	45.746	39.877
Prior Annual SAR	Dec 2007	44.407	37.792	47.793	41.785
Current Estimate	Dec 2009	43.900	38.120	47.470	42.192

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	
44.979	-1.370	-18.295	0.747	3.963	11.669	0.000	3.286	0.000	44.979

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
44.979	-0.580	-2.279	0.336	0.785	4.507	0.000	-0.278	2.491	47.470

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	
39.877	-1.249	-15.767	0.753	3.098	10.132	0.000	3.033	0.000	39.877

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
39.877	-0.550	-1.506	0.338	0.157	4.156	0.000	-0.280	2.315	42.192

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	Jul 1993	Jul 1993	Jul 1993
Milestone III	N/A	Oct 2001	Jan 2006	Mar 2006
IOC	N/A	Mar 2001	Dec 2005	Dec 2005
Total Cost (TY \$M)	N/A	11424.7	11424.7	14241.0
Total Quantity	N/A	254	254	300
PAUC	N/A	44.979	44.979	47.470

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	1375.7	10049.0	--	11424.7
Previous Changes				
Economic	-8.4	-12.2	--	-20.6
Quantity	--	--	--	--
Schedule	--	+68.5	--	+68.5
Engineering	+169.0	+38.3	--	+207.3
Estimating	+73.3	+729.8	--	+803.1
Other	--	--	--	--
Support	--	-343.6	--	-343.6
Subtotal	+233.9	+480.8	--	+714.7
Current Changes				
Economic	-1.7	-151.8	--	-153.5
Quantity	--	+1385.4	--	+1385.4
Schedule	--	+32.2	--	+32.2
Engineering	+19.7	+8.6	--	+28.3
Estimating	+40.2	+508.8	--	+549.0
Other	--	--	--	--
Support	--	+260.2	--	+260.2
Subtotal	+58.2	+2043.4	--	+2101.6
Total Changes	+292.1	+2524.2	--	+2816.3
Current Estimate	1667.8	12573.2	--	14241.0

Summary BY 2006 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	1519.0	9108.0	--	10627.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	+35.0	--	+35.0
Engineering	+154.3	+33.0	--	+187.3
Estimating	+82.5	+653.2	--	+735.7
Other	--	--	--	--
Support	--	-305.7	--	-305.7
Subtotal	+236.8	+415.5	--	+652.3
Current Changes				
Economic	--	--	--	--
Quantity	--	+1152.2	--	+1152.2
Schedule	--	+12.8	--	+12.8
Engineering	+17.8	+7.3	--	+25.1
Estimating	+36.7	+441.3	--	+478.0
Other	--	--	--	--
Support	--	+222.7	--	+222.7
Subtotal	+54.5	+1836.3	--	+1890.8
Total Changes	+291.3	+2251.8	--	+2543.1
Current Estimate	1810.3	11359.8	--	13170.1

Previous Estimate: December 2007

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-1.7
Adjustment for current and prior escalation. (Estimating)	+0.8	+0.9
New Capability for Identification Friend or Foe (IFF) MODE 5. (Engineering)	+17.8	+19.7
Refinement of cost estimate for integration of Common Data Link (CDL) (Estimating)	+7.9	+8.6
Refinement of cost estimate for Integration of Automatic Radar Periscope Detection and Discrimination (ARPDD) (Estimating)	+28.0	+30.7
RDT&E Subtotal	+54.5	+58.2

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-151.8
Total Quantity variance resulting from an increase of 46 units from 252 to 298. (Subtotal)	+1246.1	+1502.4
Quantity variance resulting from an increase of 46 units from 252 to 298. (Quantity)	(+1103.8)	(+1330.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+124.1)	(+149.7)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+6.5)	(+7.8)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+11.7)	(+14.1)
Additional Quantity Variance associated with an increase of 46 helicopters (Quantity)	+48.4	+54.6
Re-phase of procurement buy profile (Schedule)	0.0	+16.1
Additional Schedule Variance associated with the re-phase of the annual procurement profile and its resulting manufacturing inefficiencies (Schedule)	+1.1	+2.0
New requirements for Sikorsky Airframe Engineering Change Proposals (ECPs) (Engineering)	+0.8	+0.8
Adjustment for current and prior escalation. (Estimating)	+24.6	+27.1
Decrease in revised cost estimate for Lockheed Martin Mission Systems and Common Cockpit costs and re-phasing of associated contract Advance Procurement (Estimating)	-6.4	-17.8
Decrease in revised cost estimate for Sikorsky Airframe costs and actuals (Estimating)	-15.9	-19.1
Decrease in revised cost estimate for Government Furnished Equipment (GFE) requirements and actuals (Estimating)	-19.7	-23.6
Decrease in revised cost estimate for refinement of Engineering Change Order (ECO) calculations (Estimating)	-42.3	-48.0
Increase in revised cost estimate for 23 additional Airborne Low Frequency Sonar (ALFS) quantities (190 to 213) and re-phase (Estimating)	+238.1	+282.8
Increase in revised cost estimate for Production Line Shutdown costs (Estimating)	+55.1	+66.4
Increase in revised cost estimate for Non-Recurring Engineering (NRE) associated with ARPDD, ALFS, and other (Estimating)	+82.9	+90.5
Increase in Other Support. (Support) (QR)	+150.2	+179.1
Increase in Initial Spares for additional 46 helicopters. (Support) (QR)	+69.9	+78.2
Correction to align support and flyaway. (Subtotal)	0.0	0.0
(Estimating)	(+0.8)	(+0.8)
(Support)	(-0.8)	(-0.8)
Adjustment for current and prior escalation. (Support)	+3.4	+3.7
Procurement Subtotal	+1836.3	+2043.4

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: LMSI Lot 4
Contractor: Lockheed Martin Systems Integration (LMSI)
Contractor Location: Owego, NY 13827
Contract Number: N00019-04-C-0113/2
Contract Type: Firm Fixed Price (FFP)
Award Date: May 15, 2005
Definitization Date: May 17, 2006

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
76.5	N/A	12	110.2	N/A	12	110.2	110.2

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 current contract target price increased by \$33.7M due to the addition of the Lot 4 production contract Pre-Planned Product Improvement (P3I) aircraft kits.

The final aircraft under the Lot 4 procurement contract was delivered from Lockheed Martin Systems Integration (LMSI) to the Fleet on December 23, 2008. This contract is more than 90% complete and will no longer be reported.

Contract Identification

Appropriation: Procurement
Contract Name: SAC LRIP 3 & Lot 4
Contractor: Sikorsky Aircraft Corporation (SAC)
Contractor Location: Stratford, CT 06497-9129
Contract Number: N00019-04-C-0115/1
Contract Type: Firm Fixed Price (FFP)
Award Date: August 09, 2004
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
101.9	N/A	6	287.7	N/A	18	287.7	287.7

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 current contract target price increased by \$185.8M due to the addition of the Lot 4 procurement and incorporation of Pre-Planned Product Improvement (P3I) efforts.

The final aircraft under the Lot 4 procurement contract was delivered from Sikorsky to Lockheed Martin Systems Integration (LMSI), Owego, NY on September 25, 2008. This contract is more than 90% complete and will no longer be reported.

Contract Identification

Appropriation: Procurement
Contract Name: Common Data Link (CDL) FY08
Contractor: Harris Corporation
Contractor Location: Melbourne, FL 32902
Contract Number: N00019-04-C-0130
Contract Type: Cost Plus Incentive Fee (CPIF), Cost Plus Award Fee (CPAF)
Award Date: November 30, 2006
Definitization Date: November 30, 2006

Contract Price								
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
73.5	N/A	0	141.4	N/A	0	141.4	141.4	

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 (1/29/2010)	-5.5	-0.7
Previous Cumulative Variances	+0.5	-0.7
Net Change	-6.0	+0.0

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

The net unfavorable change in cost was due to the subcontractor's portion of the base contract being pushed past its baseline completion date, causing Harris Corporation to continue oversight of the program, increasing cost at both the subcontractor and Harris.

The net unfavorable change in schedule was due to delays on the base contract pushing past its baseline finish date and material receipt and vendor rework, causing the initial production contract to be behind schedule. Harris is working with its subcontractor's to maintain contract schedule.

Notes

The total contract value has increased by \$67.9M. The FY08 Common Data Link Contract (CDL) Hawklark procurement contract was awarded on August 29, 2008 for procurement of 14 Airborne Radio Multipurpose/Special Equipment (ARQ-58's) and 5 Shipboard Radio Multipurpose/Special Equipment (SRQ-4(Ku)) which increased the contract price by \$53M. Additional increase of \$14.9M consists of scope growth in production test equipment, Test and Evaluation delays and obsolescence. An Integrated Baseline review (IBR) was conducted on January 29, 2009 and a Schedule Risk Assessment (SRA) was conducted October 5, 2009.

Contract Identification

Appropriation: RDT&E
Contract Name: LMSI P3/Link 16
Contractor: Lockheed Martin Systems Integration (LMSI)
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	89.0	0	112.7	112.7	0	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	-2.1	-1.0
Net Change	+3.4	+0.9

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

The net favorable change in cost and schedule was due to funding scope growth for the Joint Mission Planning System (JMPS) Integration.

Notes

The contract price increased by \$23.7M to incorporate Pre-Planned Product Improvement (P3I) efforts associated with the Mission Planning System (MPS) and the Joint Mission Planning System (JMPS). This contract is more than 90% complete and will no longer be reported.

Contract Identification

Appropriation: Procurement
Contract Name: LMSI MY Production Lots (5-9)
Contractor: Lockheed Martin Systems Integration (LMSI)
Contractor Location: Owego, NY 13827-3998
Contract Number: N00019-06-C-0098
Contract Type: Firm Fixed Price (FFP)
Award Date: August 16, 2007
Definitization Date: August 16, 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
1065.0	N/A	138	1065.0	N/A	138	1065.0	1065.0

Cost and Schedule Variance Explanations

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

Notes

Lockheed Martin Systems Integration (LMSI) is responsible for the integration of the Mission Avionics Systems into the MH-60R. As of January 20, 2010 LMSI has delivered 19 of 25 Lot 5 aircraft to the Fleet.

Contract Identification

Appropriation: RDT&E
Contract Name: LMSI ARPDD
Contractor: Lockheed Martin Systems Integration (LMSI)
Contractor Location: Owego, NY 13827-3998
Contract Number: N00019-08-C-0005
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: June 26, 2008
Definitization Date: June 26, 2008

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
144.0	144.0	N/A	146.0	146.0	N/A	146.0	146.0

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 (11/27/2009)	-1.3	-2.9
Previous Cumulative Variances	--	--
Net Change	-1.3	-2.9

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

The net unfavorable change in cost was due to additional support to the subcontractor for Earned Value Management (EVM) and schedule reporting and minor software issues with the Xilinx toolset.

The net unfavorable change in schedule was due to insertion of multiple Product Test Assurance (PTA) events into the schedule as risk reduction for Contract Testing (CT) 1 which caused the program to be slightly behind schedule. With early completion of shore test, some schedule recovery is expected, since key personnel and more testing assets will be available.

Notes

The MH-60R Automatic Radar Periscope Detection and Discrimination (ARPDD) System Design and Development (SDD) contract was awarded to Lockheed Martin Systems Integration (LMSI) on June 26, 2008. A Preliminary Design Review (PDR) was conducted November 19-20, 2008. A Critical Design Review (CDR) was conducted April 20-22 2009. A contract modification was awarded that increased the contract price by \$2.6M for procurement of one additional AN/APS-147 Multi-Mode Radar (MMR) required to support detailed performance comparison testing. Additionally, another contract modification was awarded to descope Joint Mission Planning System (JMPS) related efforts from this contract, decreasing the contract price by \$0.6M. This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: Common Data Link (CDL) FY09
Contractor: L3 Communications Corporation
Contractor Location: Salt Lake City, UT 84116-0850
Contract Number: N00019-09-C-0059
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: June 12, 2009
Definitization Date: June 12, 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
59.8	65.0	N/A	63.9	65.0	N/A	63.9	63.9

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 (1/22/2010)	-0.3	-0.5
Previous Cumulative Variances	--	--
Net Change	-0.3	-0.5

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

The net unfavorable change in cost is due to more upfront time and planning needed for Preliminary Design Review (PDR), Schedule Risk Assessment (SRA) and Integrated Baseline Review (IBR).

The net unfavorable change in schedule is due to delays in the multiplexer power design that continue to have an impact on the Internal Critical Design Review (ICDR). As a result of the Schedule Risk Assessment (SRA) on the program schedule, it is projected that the completion date of March 9, 2012, will be consistent with contract close out once all planning is detailed.

Notes

The FY09 Common Data Link (CDL) competitive procurement was awarded to L3 Communications Corporation on June 12, 2009. The current contract target price has increased by \$4.1M for procurement of 3 additional Airborne Radio Multipurpose/Special Equipment (ARQs) and 2 Shipboard Radio Multipurpose/Special Equipment (SRQs). This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: Raytheon Integrated Defense Systems AFLS Lot 7
Contractor: Raytheon Integrated Defense Systems
Contractor Location: Portsmouth, RI 02871-1087
Contract Number: N00019-09-C-0096
Contract Type: Firm Fixed Price (FFP)
Award Date: September 22, 2009
Definitization Date: September 22, 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	
81.1	N/A	23	81.1	N/A	23	81.1	81.1	

Cost and Schedule Variance Explanations

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

Notes

The Airborne Low Frequency Sonar (ALFS) Lot 7 contract was awarded to Raytheon Company on September 22, 2009 for procurement of 23 ALFS systems. This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: SAC MY Production Lots (5-9)
Contractor: Sikorsky Aircraft Corporation (SAC)
Contractor Location: Stratford, CT 06614-1378
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
2090.0	N/A	138	2090.0	N/A	138	2090.0	2090.0

Cost and Schedule Variance Explanations

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

Notes

Sikorsky Aircraft Corporation (SAC) delivered the final aircraft under the Lot 5 procurement contract on October 29, 2009 to Lockheed Martin Systems Integration (LMSI). As of January 20, 2010 SAC has delivered 6 of 28 aircraft under the Lot 6 procurement contract.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	2	2	2	100.00%
Production	46	46	298	15.44%
Total Program Quantity Delivered	48	48	300	16.00%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	14241.0	Years Appropriated	21
Expended to Date	4465.0	Percent Years Appropriated	75.00%
Percent Expended	31.35%	Appropriated to Date	7565.5
Total Funding Years	28	Percent Appropriated	53.12%

Total program quantities delivered are as of January 20, 2010.

Operating and Support Cost

Assumptions and Ground Rules

Estimated Duration = Fiscal Year (FY) 2006 to 2038
 MH-60R Fatigue Life = 10,000 Hours or approximately 22 years
 Aircraft Attrition Rate = 0.6% of TAI per Year
 Aircraft Pipeline Rate = 15% of TAI per
 Total Procured MH-60R Aircraft = 300 (298 + 2 RDT&E)
 Aircraft per Fleet Squadron = 12
 Aircraft per Fleet Replacement Squadron = 13
 Average Flight Hours per Month per Aircraft = 37.9
 Total Operating Aircraft Years = 5409

Changes to the Milestone III estimate causing differences from the last report are: increase in aircraft quantity from 254 to 298, increase in manpower pay & allowances, and increase cost of fuel. The Base Year total was calculated multiplying the dollar per aircraft cost by the total number of aircraft years of the O&S cycle.

The antecedent system is the SH-60B/F aircraft. All costs are from the FY08 Navy Visibility and Management of Operating and 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.

Changes from the 2007 SAR also include converting from reporting as dollars per squadron to dollar per aircraft. Although labeled BY\$2006, the O&S SAR figures are actually in BY\$1993. There was no O&S submission in 2008.

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY2006 \$M		
Cost Element	Multi-Mission Helicopter Dollars/Per (A/C)	SH-60B/F (Antecedent) Dollars/Per (A/C)
Mission Pay & Allowance	2.090	1.990
Unit Level Consumption	2.630	1.430
Intermediate Maintenance	0.260	0.420
Depot Maintenance	0.230	0.400
Contractor Support	0.020	0.000
Sustaining Support	0.500	0.200
Indirect	0.380	0.410
Other	--	--
Total	6.110	4.850

Unitized Cost Comments:

None

Item	Total O&S Cost \$M				
	Multi-Mission Helicopter			SH-60B/F (Antecedent)	
	Current Production APB Objective/Threshold		Current Estimate		
Base Year	28311.0	31142.1	33049.0¹		N/A
Then Year	44670.0	N/A	51875.0		N/A

¹ APB O&S Cost Breach

Total O&S Cost Comment

None

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2006 \$M):