

# Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-341



# UH-60M Black Hawk Helicopter (UH-60M Black Hawk)

As of FY 2015 President's Budget

Defense Acquisition Management Information Retrieval (DAMIR)

UNCLASSIFIED

	Form Approved OMB No. 0704-0188					
maintaining the data needed, and c including suggestions for reducing	lection of information is estimated t completing and reviewing the collect t this burden, to Washington Headqu uld be aware that notwithstanding an DMB control number.	ion of information. Send comments arters Services, Directorate for Info	s regarding this burden estimate prmation Operations and Reports	or any other aspect of the s, 1215 Jefferson Davis	nis collection of information, Highway, Suite 1204, Arlington	
1. REPORT DATE DEC 2013			3. DATES COVE 00-00-2013	BRED 3 to 00-00-2013		
4. TITLE AND SUBTITLE				5a. CONTRACT	NUMBER	
UH-60M Black Ha	wk Helicopter (UH-	60M Black Hawk)		5b. GRANT NUN	/BER	
				5c. PROGRAM E	ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NU	JMBER	
				5e. TASK NUME	BER	
				5f. WORK UNIT NUMBER		
Utility Helicopters	ZATION NAME(S) AND AI Project Office,,Prog Arsenal,,AL,35898	gram Executive Off	ïce	8. PERFORMING REPORT NUMB	G ORGANIZATION ER	
9. SPONSORING/MONITO	RING AGENCY NAME(S) A	AND ADDRESS(ES)		10. SPONSOR/M	10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAIL Approved for publ	LABILITY STATEMENT ic release; distribut	ion unlimited				
13. SUPPLEMENTARY NO Selected Acquisitio						
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFIC	17. LIMITATION OF ABSTRACT	18. NUMBER	19a. NAME OF			
a. REPORT unclassified	b. ABSTRACT unclassified	OF PAGES 32	RESPONSIBLE PERSON			

Standard Form 298 (Rev. 8-98) Prescribed by ANSI Std Z39-18

## **Table of Contents**

Common Acronyms and Abbreviations	3
Program Information	4
Responsible Office	4
References	4
Mission and Description	5
Executive Summary	6
Threshold Breaches	7
Schedule	8
Performance	10
Track to Budget	12
Cost and Funding	13
Low Rate Initial Production	20
Foreign Military Sales	21
Nuclear Costs	21
Unit Cost	22
Cost Variance	25
Contracts	28
Deliveries and Expenditures	29
Operating and Support Cost	30

## **Common Acronyms and Abbreviations**

Acq O&M - Acquisition-Related Operations and Maintenance **APB** - Acquisition Program Baseline APPN - Appropriation APUC - Average Procurement Unit Cost BA - Budget Authority/Budget Activity BY - Base Year DAMIR - Defense Acquisition Management Information Retrieval Dev Est - Development Estimate DoD - Department of Defense DSN - Defense Switched Network Econ - Economic Eng - Engineering Est - Estimating FMS - Foreign Military Sales FY - Fiscal Year IOC - Initial Operational Capability \$K - Thousands of Dollars LRIP - Low Rate Initial Production \$M - Millions of Dollars MILCON - Military Construction N/A - Not Applicable O&S - Operating and Support Oth - Other PAUC - Program Acquisition Unit Cost PB - President's Budget PE - Program Element Proc - Procurement Prod Est - Production Estimate **QR** - Quantity Related Qty - Quantity RDT&E - Research, Development, Test, and Evaluation SAR - Selected Acquisition Report Sch - Schedule Spt - Support TBD - To Be Determined TY - Then Year UCR - Unit Cost Reporting

## **Program Information**

#### Program Name

UH-60M Black Hawk Helicopter (UH-60M Black Hawk)

#### **DoD Component**

Army

### **Responsible Office**

Responsible Office	
COL Thomas II Todd III	

COL Thomas H. Todd, III Utility Helicopters Project Office Program Executive Office Aviation Redstone Arsenal, AL 35898-5000

thomas.h.todd8.mil@mail.mil

Phone256-955-8939Fax256-955-8109DSN Phone645-8939DSN Fax645-8109Date AssignedJune 29, 2011

### References

### SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 31, 2005

#### Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 20, 2011

## **Mission and Description**

The UH-60M Black Hawk Helicopter (UH-60M Black Hawk) serves as the Army's utility helicopter for the current and future force and is in line with the Army's Modernization Strategy, the National Military Strategy, and the National Defense Strategy. The UH-60M Black Hawk is a digital networked platform with greater range and lift to support maneuver Commanders through air assault, general support command and control, and aeromedical evacuation. Full rate production for this new-build helicopter began in 2007. The UH-60M Black Hawk, with the integrated Medical Evacuation (MEDEVAC) Mission Equipment Package (MEP) kit, provides day/night and adverse weather emergency evacuation of casualties. The integration of the MEDEVAC MEP onto the UH-60M changes the nomenclature to HH-60M.

## **Executive Summary**

The FY 2015 PB accelerated the procurement quantity buy profile as a result of the Aviation Restructure Initiative.

The eighth Multi-Year (MY)/Multi-Service contract, W58RGZ-12-C-0008, (MY VIII) covering the years FY 2012 - FY 2016 was awarded on July 6, 2012. The requirement for this Full Rate Production contract is for a total of 491 H-60M aircraft (270 UH-60Ms and 120 HH-60Ms for the Army,18 UH-60Ms for the U.S. Air Force (USAF), 24 UH-60Ms for the Saudi Arabia National Guard, three UH-60Ms for Thailand, and 56 UH-60Ms for Taiwan).

MY VII deliveries are complete.

To date, a total of 161 MY VIII aircraft (102 UH-60Ms and 41 HH-60Ms for the US Army; and 18 UH-60Ms for the USAF) were accepted.

In the Delivery Profile Graphic (Plan vs. Actual) Sikorsky Aircraft Corporation is currently ahead of the contract delivery schedule by one aircraft.

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

# **Threshold Breaches**

APB Breaches								
RDT&E								
Procurement								
MILCON								
Acq O&M								
	$\checkmark$							
PAUC								
APUC								
urdy Breache	s							
aseline								
PAUC	None							
APUC	None							
Baseline								
PAUC	None							
APUC None								
	RDT&E Procurement MILCON Acq O&M PAUC APUC <b>urdy Breache</b> <b>aseline</b> PAUC APUC <b>Baseline</b> PAUC Baseline PAUC							

#### **Explanation of Breach**

O&S Cost Breach: The current O&S cost in the UH-60M Black Hawk June 2011 APB represents Operations and Maintenance cost not Operating and Support cost. The difference between the two is: Operations and Maintenance cost does not include Military Personnel costs. The UH-60M Black Hawk Program incorporated the revised Economic Useful Life expectancy from 20-years to 25-years as identified in the April 22, 2012 memorandum from the Assistant Secretary of the Army (Acquisition, Logistics and Technology).

# Schedule



Milestones	SAR Baseline Prod Est	Curre Prod Objective	Current Estimate	
Milestone B	MAR 2001	MAR 2001	MAR 2001	MAR 2001
SDD Contract Award	MAY 2001	MAY 2001	MAY 2001	MAY 2001
System PDR	NOV 2002	NOV 2002	NOV 2002	NOV 2002
System CDR	JUN 2003	JUN 2003	JUN 2003	JUN 2003
First Flight	SEP 2003	SEP 2003	SEP 2003	SEP 2003
Milestone C	FEB 2005	MAR 2005	NOV 2005	MAR 2005
LRIP Contract Award	MAR 2005	JUN 2005	DEC 2005	JUN 2005
OT Start	SEP 2006	SEP 2006	SEP 2007	OCT 2006
OT Complete	NOV 2006	NOV 2006	NOV 2007	NOV 2006
Full Rate Production IPR	MAY 2007	MAY 2007	MAY 2008	MAY 2007
FUE	JAN 2008	JAN 2008	JAN 2009	FEB 2008

# Change Explanations

None

#### Acronyms and Abbreviations

CDR - Critical Design Review FUE - First Unit Equipped IPR - In-Process Review OT - Operational Test PDR - Preliminary Design Review SDD - System Design & Development

# Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate	
Key Performance Parameters (KPPs)						
Interoperability (meet IERs)	All	N/A	N/A	N/A	N/A	
Net-Ready	All	All	All Critical	All	All	
Survivability IR Signature	N/A	Existing	Existing	Existing	Existing	
Aircraft Survivability Equipment	N/A	Existing	Existing	Existing	Existing	
Survivability Fuel Cells	N/A	14.5mm	7.62mm	7.62mm	7.62mm	
Force Protection Armor Plating	N/A	14.5mm	7.62mm	7.62mm	7.62mm	
External Lift						
Payload	10,000	10,000	4,500	4,888	4,888	
Non-KPPs						
Troop Movement						
Airspeed (Sustained Cruise) (KTAS)	175	175	145	142.0	145.0	
One Engine Inoperative (KTAS)	100	100	100	TBD	100.0	
Combat Radius (w/20 min reserve) (KM)	500	500	225	225.0	225.6	
Vertical Rate of Climb (fpm)	750	750	500	725	725	
Vertical Rate of Climb w/ One Engine Inoperative (fpm)	200	200	100	TBD	100.0	
Internal Lift Capability (290 lbs each)	11	11	11	11	11	
Self-Deploy Range (nautical miles)	1260	1260	1056	TBD	1071	
Ballistic Protection (ground fired armor piercing (mm))	14.5	14.5	7.62	14.5	14.5	
Maintainability (mhrs per flight hr)	4.6	4.6	5.4	2.3	4.1	
Unscheduled mhrs per	1.3	1.3	2.1	0.4	1.1	

flight hr					
External Lift					
Vertical Rate of Climb (fpm)	500	500	200	200	200
Combat Radius (w/20 min reserve) (KM)	275	275	135	135	135

### **Requirements Source**

Operational Requirements Document (ORD) dated January 29, 2007

#### Change Explanations

None

#### Acronyms and Abbreviations

fpm - feet per minute hr - hour IER - Information Exchange Requirement IR - Infra-Red KM - Kilometer KTAS - Knots True Air Speed Ibs - Pounds mhrs - Man Hours min - Minutes mm - Millimeter w - With

# Track to Budget

\_

RDT&E						
Арр	on	BA	PE			
Army	2040	07	0203744A		_	
	Project		Name			
	504		UH-60M Recapitalizat	tion/Modifications	(Shared)	(Sunk)

Only UH-60M Black Hawk and UH-60M Upgrade Technologies (RDT&E only) funds are included in this SAR.

Procurem	ent				
Арр	n	BA	PE		
Army	2031	01	0210101A		
	Line Item		Name		
	A05002		Black Hawk UH-60M (MYP)	(Shared)	
Army	2031	02	0210101A	_	
	Line Item		Name		
	AA0492		Black Hawk UH-60M Upgrade/Recap	(Shared)	(Sunk)

The Aircraft Procurement, Army (APA) Line Item AA0492 is shared with other UH-60M Black Hawk modifications such as Crashworthy External Fuel System, Medical Equipment Package, and other safety modifications. No funds from the AA0492 line are included in this SAR.

The APA Line Item AA0005 is the parent to the APA Line Item A05002.

The APA Line Item A05002 is shared with the Multi-Year Procurement (MYP) VI of UH-60L Black Hawk aircraft. With this being a shared funding line, only UH-60M Black Hawk Baseline Program costs are included. Procurement of UH-60L Black Hawk aircraft was completed in FY 2006.

# **Cost and Funding**

## **Cost Summary**

	В	Y2005 \$M		BY2005 \$M	TY \$M			
Appropriation	SAR Baseline Prod Est	Curren Produ Objective/1	ction	Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate	
RDT&E	717.5	761.3	837.4	761.3	739.3	780.4	780.4	
Procurement	16084.2	21873.7	24061.1	20233.9	20107.8	27314.2	25459.0	
Flyaway				19142.6			24113.4	
Recurring				18927.6			23866.1	
Non Recurring				215.0			247.3	
Support				1091.3			1345.6	
Other Support				902.7			1106.1	
Initial Spares				188.6			239.5	
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	16801.7	22635.0	N/A	20995.2	20847.1	28094.6	26239.4	

#### **Total Acquisition Cost and Quantity**

Confidence Level for Current APB Cost 50% -

In March, 2011 the Program Office and the Deputy Assistant Secretary of the Army for Cost and Economics (DASA-CE) agreed on an Army Cost Position which was used to establish the Acquisition Program Baseline (APB), dated June 20, 2011. Costs are reflected at the 50% Confidence Level in accordance with the Army Cost and Economic Analysis Program, Army Regulation 11-18.

It is difficult to calculate mathematically the precise confidence levels associated with life cycle cost estimates prepared for Major Defense Acquisition Programs (MDAPs). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	8	8	8
Procurement	1227	1367	1367
Total	1235	1375	1375

# **Cost and Funding**

# **Funding Summary**

Appropriation and Quantity Summary FY2015 President's Budget / December 2013 SAR (TY\$ M)									
Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	780.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	780.4
Procurement	10664.1	1235.0	1369.1	1296.3	1507.8	1541.5	1485.9	6359.3	25459.0
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 2015 Total	11444.5	1235.0	1369.1	1296.3	1507.8	1541.5	1485.9	6359.3	26239.4
PB 2014 Total	11089.3	1163.0	1169.8	1401.0	793.7	733.4	1295.7	8047.9	25693.8
Delta	355.2	72.0	199.3	-104.7	714.1	808.1	190.2	-1688.6	545.6

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	8	0	0	0	0	0	0	0	0	8
Production	0	609	70	79	71	70	104	86	278	1367
PB 2015 Total	8	609	70	79	71	70	104	86	278	1375
PB 2014 Total	8	583	65	65	89	35	34	72	424	1375
Delta	0	26	5	14	-18	35	70	14	-146	0

# **Cost and Funding**

# **Annual Funding By Appropriation**

### **Annual Funding TY\$**

# 2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2000							9.5
2001							28.8
2002							55.9
2003							96.8
2004							144.8
2005							99.8
2006							106.6
2007							117.5
2008							84.9
2009							30.8
2010							5.0
Subtotal	8						780.4

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
2000							10.2
2001							30.5
2002							58.6
2003							99.5
2004							145.4
2005							97.4
2006							101.3
2007							109.0
2008							77.3
2009							27.7
2010							4.4
Subtotal	8						761.3

#### Annual Funding BY\$ 2040 | RDT&E | Research, Development, Test, and Evaluation, Army

FY 2010 - FY 2011 RDT&E includes funds for the Fly-By-Wire flight test program and is no longer a part of the program of record as directed by the February 18, 2010 Acquisition Decision Memorandum (ADM). Subsequent reports will reflect the direction of the ADM.

Annual Funding TY\$
2031   Procurement   Aircraft Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2004		13.5			13.5		13.5
2005	5	82.5	6.1	5.6	94.2	2.8	97.0
2006	17	241.3	7.5	4.5	253.3	15.2	268.5
2007	72	1086.3	85.8	45.4	1217.5	54.4	1271.9
2008	77	1144.4	85.3	63.3	1293.0	61.6	1354.6
2009	66	962.3	92.0	9.0	1063.3	48.2	1111.5
2010	84	1182.5	172.0	4.5	1359.0	124.2	1483.2
2011	99	1512.5	131.4	36.2	1680.1	108.8	1788.9
2012	89	1298.0	174.5	35.9	1508.4	189.1	1697.5
2013	100	1263.9	179.6	3.7	1447.2	130.3	1577.5
2014	70	975.6	170.9	1.2	1147.7	87.3	1235.0
2015	79	1117.8	179.9	2.4	1300.1	69.0	1369.1
2016	71	1045.7	177.5	1.2	1224.4	71.9	1296.3
2017	70	1239.7	212.4	11.2	1463.3	44.5	1507.8
2018	104	1257.0	220.1	16.1	1493.2	48.3	1541.5
2019	86	1199.8	223.9	1.6	1425.3	60.6	1485.9
2020	46	811.5	216.3	0.9	1028.7	48.7	1077.4
2021	50	874.1	224.0	0.9	1099.0	29.8	1128.8
2022	50	945.9	232.0	1.0	1178.9	32.4	1211.3
2023	50	772.7	232.9	1.0	1006.6	33.1	1039.7
2024	50	830.3	240.8	1.0	1072.1	33.4	1105.5
2025	32	464.6	235.0	0.7	700.3	34.2	734.5
2026			44.3		44.3	17.8	62.1
Subtotal	1367	20321.9	3544.2	247.3	24113.4	1345.6	25459.0

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
2004		13.4			13.4		13.4
2005	5	79.6	5.8	5.4	90.8	2.7	93.5
2006	17	226.6	7.0	4.2	237.8	14.3	252.1
2007	72	999.9	78.9	41.8	1120.6	50.1	1170.7
2008	77	1036.9	77.2	57.4	1171.5	55.8	1227.3
2009	66	859.5	82.2	8.0	949.7	43.1	992.8
2010	84	1038.0	151.0	4.0	1193.0	109.0	1302.0
2011	99	1303.7	113.3	31.2	1448.2	93.8	1542.0
2012	89	1098.9	147.7	30.4	1277.0	160.1	1437.1
2013	100	1047.1	148.9	3.1	1199.1	107.9	1307.0
2014	70	792.6	138.7	1.0	932.3	71.0	1003.3
2015	79	890.8	143.4	1.9	1036.1	55.0	1091.1
2016	71	817.1	138.8	0.9	956.8	56.1	1012.9
2017	70	949.7	162.7	8.6	1121.0	34.1	1155.1
2018	104	944.1	165.2	12.1	1121.4	36.3	1157.7
2019	86	883.4	164.9	1.2	1049.5	44.6	1094.1
2020	46	585.8	156.2	0.6	742.6	35.2	777.8
2021	50	618.6	158.6	0.6	777.8	21.1	798.9
2022	50	656.3	161.0	0.7	818.0	22.5	840.5
2023	50	525.6	158.5	0.7	684.8	22.5	707.3
2024	50	553.7	160.6	0.7	715.0	22.3	737.3
2025	32	303.8	153.5	0.5	457.8	22.4	480.2
2026			28.4		28.4	11.4	39.8
Subtotal	1367	16225.1	2702.5	215.0	19142.6	1091.3	20233.9

#### Annual Funding BY\$ 2031 | Procurement | Aircraft Procurement, Army

On May 18, 2010, the Aviation Synchronization Conference Council of Colonels recommended the Authorized Acquisition Objective increase from 1,227 to 1,365. Two additional aircraft were procured in the upgrade configuration. These two aircraft will not be fielded.

### Cost Quantity Information 2031 | Procurement | Aircraft Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2005 \$M
2004		
2005	5	70.0
2006	17	173.9
2007	72	914.3
2008	77	1103.9
2009	66	839.2
2010	84	1067.2
2011	99	1313.8
2012	89	1034.6
2013	100	1083.9
2014	70	812.2
2015	79	869.5
2016	71	779.4
2017	70	767.1
2018	104	1132.3
2019	86	943.9
2020	46	580.8
2021	50	598.2
2022	50	601.6
2023	50	602.8
2024	50	581.2
2025	32	355.3
2026		
Subtotal	1367	16225.1

# Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	3/31/2005	3/31/2005
Approved Quantity	40	40
Reference	Milestone C ADM	Milestone C ADM
Start Year	2005	2005
End Year	2007	2007

The Milestone C Acquisition Decision Memorandum (ADM) dated March 31, 2005, contains approval of up to 40 LRIP aircraft units and approval to award Advance Procurement Contract for the first lot of Full Rate Production aircraft.

# **Foreign Military Sales**

Country	Date of Sale	Quantity	Total Cost \$M	Memo
Thailand	9/25/2012	1	31.0	Case Number TH-B-UAD
Thailand	12/26/2011	2	62.3	Case Number TH-B-UAE
Saudi Arabia	11/30/2011	24	638.3	Case Number SI-B-WXP
Sweden	1/14/2011	15	275.7	Case Number SW-B-WAD
Taiwan	11/22/2010	60	1717.7	Case Number TW-B-YZC
Jordan	9/1/2010	2	26.3	Case Number JO-B-WAT
Mexico	8/3/2010	3	83.9	Case Number MX-B-UEJ
United Arab Emirates	12/12/2007	40	825.0	Case Number AE-B-ZUE
Bahrain	9/18/2007	9	151.9	Case Number BA-B-UIR

To date all FMS have been for the UH-60M Black Hawk configuration of the aircraft. Total Cost \$M reflects all costs associated with the procurement of the aircraft and other services provided to the specific country to include: training, spares, etc.

# **Nuclear Costs**

None

# **Unit Cost**

# **Unit Cost Report**

	BY2005 \$M	BY2005 \$M	
Unit Cost	Current UCR Baseline (JUN 2011 APB)	Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	22635.0	20995.2	
Quantity	1375	1375	
Unit Cost	16.462	15.269	-7.25
Average Procurement Unit Cost (APU)	C)		
Cost	21873.7	20233.9	
Quantity	1367	1367	
Unit Cost	16.001	14.802	-7.49
	BY2005 \$M	BY2005 \$M	
Unit Cost	Revised Original UCR Baseline (MAR 2005 APB)	Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	16801.7	20995.2	
		1075	
Quantity	1235	1375	
Quantity Unit Cost	1235 13.605	1375 15.269	+12.23
5	13.605		+12.23
Unit Cost	13.605		+12.23
Unit Cost Average Procurement Unit Cost (APU)	13.605 C)	15.269	+12.23

# **Unit Cost History**



		BY2005 \$M		TY	\$M
	Date	PAUC	APUC	PAUC	APUC
Original APB	FEB 2002	9.250	9.042	12.008	11.812
APB as of January 2006	MAR 2005	13.605	13.109	16.880	16.388
Revised Original APB	MAR 2005	13.605	13.109	16.880	16.388
Prior APB	FEB 2007	14.872	14.338	18.840	18.319
Current APB	JUN 2011	16.462	16.001	20.432	19.981
Prior Annual SAR	DEC 2012	14.787	14.317	18.686	18.225
Current Estimate	DEC 2013	15.269	14.802	19.083	18.624

#### SAR Unit Cost History

#### Initial SAR Baseline to Current SAR Baseline (TY \$M)

Initial PAUC		Changes							PAUC
Dev Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Prod Est
12.008	-0.325	4.705	-0.262	0.996	-0.326	0.000	0.084	4.872	16.880

### Current SAR Baseline to Current Estimate (TY \$M)

PAUC		Changes						PAUC	
Prod Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Current Est
16.880	-0.039	0.675	0.523	0.476	0.110	0.000	0.458	2.203	19.083

#### Initial SAR Baseline to Current SAR Baseline (TY \$M)

Initial APUC		Changes							APUC
Dev Est	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Prod Est
11.812	-0.324	4.469	-0.287	0.987	-0.354	0.000	0.085	4.576	16.388

### Current SAR Baseline to Current Estimate (TY \$M)

APUC		Changes							APUC
Prod Est	Econ	on Qty Sch Eng Est Oth Spt Total					Current Est		
16.388	-0.042	0.728	0.506	0.481	0.102	0.000	0.461	2.236	18.624

### **SAR Baseline History**

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	APR 2001	MAR 2001	MAR 2001
Milestone C	N/A	MAR 2004	FEB 2005	MAR 2005
FUE	N/A	SEP 2006	JAN 2008	FEB 2008
Total Cost (TY \$M)	N/A	14662.0	20847.1	26239.4
Total Quantity	N/A	1221	1235	1375
Prog. Acq. Unit Cost (PAUC)	N/A	12.008	16.880	19.083

# **Cost Variance**

Summary Then Year \$M							
	RDT&E	Proc	MILCON	Total			
SAR Baseline (Prod Est)	739.3	20107.8		20847.1			
Previous Changes							
Economic	+3.9	+62.8		+66.7			
Quantity		+3291.3		+3291.3			
Schedule	+27.5	+317.6		+345.1			
Engineering	-2.1	+657.2		+655.1			
Estimating	+11.8	-124.1		-112.3			
Other							
Support		+600.8		+600.8			
Subtotal	+41.1	+4805.6		+4846.7			
Current Changes							
Economic		-120.4		-120.4			
Quantity							
Schedule		+373.8		+373.8			
Engineering							
Estimating		+263.3		+263.3			
Other							
Support		+28.9		+28.9			
Subtotal		+545.6		+545.6			
Total Changes	+41.1	+5351.2		+5392.3			
CE - Cost Variance	780.4	25459.0		26239.4			
CE - Cost & Funding	780.4	25459.0		26239.4			

Summary Base Year 2005 \$M						
	RDT&E	Proc	MILCON	Total		
SAR Baseline (Prod Est)	717.5	16084.2		16801.7		
Previous Changes						
Economic						
Quantity		+2330.0		+2330.0		
Schedule	+24.1	+122.5		+146.6		
Engineering	+9.5	+529.3		+538.8		
Estimating	+10.2	+27.3		+37.5		
Other						
Support		+477.8		+477.8		
Subtotal	+43.8	+3486.9		+3530.7		
Current Changes						
Economic						
Quantity						
Schedule		+440.6		+440.6		
Engineering						
Estimating		+192.5		+192.5		
Other						
Support		+29.7		+29.7		
Subtotal		+662.8		+662.8		
Total Changes	+43.8	+4149.7		+4193.5		
CE - Cost Variance	761.3	20233.9		20995.2		
CE - Cost & Funding	761.3	20233.9		20995.2		

Previous Estimate: December 2012

Procurement	\$N	1
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-120.4
Adjustment for current and prior escalation. (Estimating)	+34.5	+41.3
Acceleration of procurement buy profile from FY 2014 - FY 2019 due to Aviation Restructure Initiative. (Schedule)	0.0	-256.5
Additional Schedule variance due to adjustment for allocation of Multi-Year (MY) advanced procurement dollars. (Schedule)	+440.6	+630.3
Revised estimate to reflect application of new outyear escalation indices. (Estimating)	-0.3	0.0
Revised estimate for MY IX Contract as a Single Service versus prior MY/Multi-Service contracts. (Estimating)	+138.6	+195.9
Revised estimate for MY IX Discrete Tooling. (Estimating)	+19.7	+26.1
Adjustment for current and prior escalation. (Support)	+3.1	+3.7
Increase in Other Support due to acceleration of procurement buy profile as directed by Aviation Restructure Initiative and revised cost estimates. (Support)	+11.4	+8.8
Increase in Initial Spares due to acceleration of procurement buy profile as directed by Aviation Restructure Initiative and revised cost estimates. (Support)	+15.2	+16.4
Procurement Subtotal	+662.8	+545.6

# Contracts

Appropriation: Procurement	
Contract Name	Multi-Year/Multi-Service 8
Contractor	Sikorsky Aircraft Corporation
Contractor Location	6900 Main St Stratford, CT 06614
Contract Number, Type	W58RGZ-12-C-0008, FFP
Award Date	July 06, 2012
Definitization Date	July 06, 2012

Initial Co	ntract Price	(\$M)	Current Contract Price (\$M)			Estimated Price at Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
4560.2	N/A	390	4560.2	N/A	390	4560.2	4560.2	

#### **Cost and Schedule Variance Explanations**

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

### **Contract Comments**

The UH-60M Black Hawk is currently in the third year of a five year Multi-Year/Multi-Service contract. Army deliveries are currently one aircraft ahead of schedule.

# **Deliveries and Expenditures**

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	8	8	8	100.00%
Production	568	569	1367	41.62%
Total Program Quantity Delivered	576	577	1375	41.96%

Expended and Appropriated (TY \$M)					
Total Acquisition Cost	26239.4	Years Appropriated	15		
Expended to Date	11810.5	Percent Years Appropriated	55.56%		
Percent Expended	45.01%	Appropriated to Date	12679.5		
Total Funding Years	27	Percent Appropriated	48.32%		

The above data is current as of 3/31/2014.

# **Operating and Support Cost**

#### **UH-60M Black Hawk**

#### Assumptions and Ground Rules

#### Cost Estimate Reference:

The latest estimate was approved by the Army Cost Position (ACP) in March 2011.

Since the last ACP in March 2011 the Program Office Estimate has been updated to incorporate the revised Economic Useful Life (EUL) expectancy from 20-years to 25-years as identified in the April 22, 2012 memorandum from the Assistant Secretary of the Army (Acquisition, Logistics and Technology).

#### Sustainment Strategy:

The approved estimate is based on a system life of 20-years. The maintenance concept for the UH-60M Black Hawk is organic, two-level maintenance with the exception of the training base. The training base will continue to be Contractor Logistics Support. A total of 1,367 UH/HH aircraft will be procured with 1,365 being sustained. The two aircraft to not be sustained are in the upgrade configuration and are designated to be test aircraft.

#### Antecedent Information:

The total O&S Costs for UH-60L Black Hawk were not reported in the last UH-60L Black Hawk SAR dated December 31, 1999. The information in the O&S Cost Table is based on O&S Management Information Systems (OSMIS) data for the UH-60L Black Hawk (excluding Contingency Operations). Sustaining support costs for the UH-60L Black Hawk aircraft are not included in the table because the costs (software maintenance, system specific base operations, systems engineering/program management and transportation) are not collected in the OSMIS database. There are 780 UH-60L Black Hawks in the current fleet with an EUL expectancy of 25-years.

Unitized O&S Costs BY2005 \$K							
Cost Element	UH-60M Black Hawk Avg Annual Cost per Aircraft	UH-60L Black Hawk (Antecedent) Avg Annual Cost per Aircraft					
Unit-Level Manpower	426.155	426.155					
Unit Operations	54.194	54.194					
Maintenance	373.686	284.892					
Sustaining Support	1.225	0.000					
Continuing System Improvements	6.157	0.000					
Indirect Support	216.538	216.538					
Other	0.000	0.000					
Total	1077.955	981.779					

#### Unitized Cost Comments:

The total O&S Costs are derived by multiplying the associated O&S average annual cost per aircraft by total number of aircraft fielded then multiplying by the total number of years each aircraft will be fielded. Equation: Average Annual Cost Per Aircraft \* Quantity Fielded \* System Life (\$1.0779548\* 1365 \* 25 = \$36,785.207 Base Year 2005 Dollars in Millions).

	Total O&S Cost \$M			
	Current Production APB Objective/Threshold		Current Estimate	
	UH-60M Black Hawk		UH-60M Black Hawk	UH-60L Black Hawk (Antecedent)
<b>Base Year</b>	17652.5	19417.8	36785.2 <sup>1</sup>	N/A
Then Year	26086.5	N/A	58392.1	N/A

#### <sup>1</sup> APB O&S Cost Breach

#### Total O&S Costs Comments:

The current O&S cost in the UH-60M Black Hawk APB dated June 2011 represents Operations and Maintenance cost not Operations and Support cost. The difference between the two is: Operations and Maintenance cost does not include Military Personnel costs.

O&S Cost Variance				
Category	Base Year 2005 \$M	Change Explanation		
Prior SAR Total O&S Estimate December 2012	36,813.1			
Cost Estimating Methodology	0.0			
Cost Data Update	-27.9	Adjustment for current and prior escalation.		
Labor Rate	0.0			
Energy Rate	0.0			
Technical Input	0.0			
Programmatic/Planning Factors	0.0			
Other	0.0			
Total Changes	-27.9			
Current Estimate	36,785.2			

### **Disposal Costs:**

Demilitarization cost is estimated to be \$74.893M (BY\$ 2005).