# **CLEARED**For Open Publication

By kempr on Apr 24, 2023

Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

# **Selected Acquisition Report (SAR)**



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

FY 2024 President's Budget

Defense Acquisition Visibility Environment (DAVE)

# Table of Contents

| Acronyms and Abbreviations  | 3  |
|-----------------------------|----|
| Program Information         | 5  |
| Responsible Office          | 5  |
| Mission and Description     |    |
| Executive Summary           | 7  |
| Schedule                    | 8  |
| Performance                 |    |
| Acquisition Budget Estimate |    |
| Unit Cost                   |    |
| Risks                       | 15 |
| Low Rate Initial Production |    |
| Contracts                   |    |
| Deliveries and Expenditures |    |
| Operating and Support Costs | 23 |

# **Common Acronyms and Abbreviations**

\$B - Billions of Dollars

\$K - Thousands of Dollars

\$M - Millions of Dollars

**ACAT - Acquisition Category** 

Acq O&M - Acquisition-Related Operations and Maintenance

ADM - Acquisition Decision Memorandum

APB - Acquisition Program Baseline

APPN - Appropriation

APUC - Average Procurement Unit Cost

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

FMS - Foreign Military Sales

FOC - Full Operational Capability

FRP - Full Rate Production

FY - Fiscal Year

FYDP - Future Years Defense Program

ICE - Independent Cost Estimate

Inc - Increment

**IOC** - Initial Operational Capability

JROC - Joint Requirements Oversight Council

**KPP** - Key Performance Parameter

LRIP - Low Rate Initial Production

MDA - Milestone Decision Authority

MDAP - Major Defense Acquisition Program

MILCON - Military Construction

N/A - Not Applicable

O&M - Operations and Maintenance

O&S - Operating and Support

ORD - Operational Requirements Document

OSD - Office of the Secretary of Defense

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

U.S. - United States

UCR - Unit Cost Reporting

USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

# **Program Information**

**Program Name** 

UH-60M Black Hawk Helicopter

# **DoD** Component

Army

# Responsible

# **Program Manager**

Name: COL Calvin Lane Phone: 256-876-6821

Email: calvin.j.lane2.mil@army.mil

# **Mission and Description**

The UH-60M Black Hawk Helicopter (UH-60M Black Hawk) serves as the Army's utility helicopter for the near and midterm 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 (FRP) 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**

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

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

#### **Program Highlights Since Last Report**

The UH-60M Black Hawk program requirements are stable and funding is adequate to meet cost, schedule, and performance objectives established in the current Acquisition Program Baseline (APB). On June 26, 2022, a Firm Fixed Price (FFP) Multi-Year (MY) X contract was awarded. The PM received approval on September 13, 2022, from the Office of the Chief Legislative Liaison (OCLL) to procure 7 UH-60M with FY22 Congressional add of \$211.5M. Contract award for these aircraft was executed on November 15, 2022, and the balance will be used to procure required government furnished equipment (GFE) and associated support. In addition, the PM received approval on December 21, 2022, from the Office of the Chief Legislative Liaison (OCLL) to procure 10 UH-60M with FY23 Congressional add of \$273M. Contract award for these aircraft is scheduled for March 2023 and the remaining balance will be used to procure required GFE and associated support. As of December 31, 2022, the PM completed fielding to 2-285th AZ/ND ARNG and 3-142nd ASLT CT/ME/NY ARNG. Additionally, the following units continue to be fielded:

- 6 of 15 UH-60M A/C to 1-52nd GSAB, 16 CAB with expected completion June 2023
- 16 of 30 UH-60M A/C to 1-135th AHB MO/PA ARNG with expected completion December 2023
- 13 of 15 HH-60M A/C to 2-104th GSAB in PA/WV with expected completion March 2023

All aircraft deliveries have been completed under the MY IX contract. A total of 301 MY IX Army aircraft (220 UH / 81 HH) were procured (accepted) under this contract. A total of 15 MY X Army aircraft (6 UH / 9 HH) have been accepted under this contract. This includes only Army aircraft, not Foreign Military Sales (FMS). The UH-60M Black Hawk program (Army only) procured a total of 1,222 aircraft (904 UH, 318 HH) and fielded a total of 1,209 aircraft (893 UH / 316 HH). There are no significant software-related issues with the program at this time.

| Date     | Significant Development Description  |
|----------|--|
| Nov 2022 | Congressional plus up for 7 additional UH-60M awarded.   |
| Sep 2022 | The Office of the Chief Legislative Liaison (OCLL) notified the project office of Congressional approval for the procurement of 7 additional UH-60M.   |
| Jun 2022 | The tenth MY Procurement Contract from FY22 through FY26 was awarded.  |
| Jan 2021 | Executed 5th Year of 5-year MY IX contract.  |
| Jun 2017 | The ninth MY Procurement Contract from FY 2017 through FY 2021 was awarded.  |
| Jul 2012 | The eighth MY/Multi-Service Procurement Contract from FY 2012 through FY 2016 was awarded.   |
| Jun 2011 | The Defense Acquisition Executive (DAE) approved the UH-60M Black Hawk APB completing the re-baseline.   |
| May 2010 | The Aviation Synchronization Conference Council of Colonels recommended the Army Acquisition Objective (AAO) increase from 1,227 to 1,367.   |
| Feb 2010 | A Configuration Steering Board (CSB) held on October 15, 2009, recommended to the DAE that the UH-60 Modernization Program restructure. The recommendation included three parts: 1) Produce UH-60M baseline aircraft only, 2) Complete Development Testing on Fly-By-Wire aircraft and 3) Migrate selected technologies from the Upgrade development effort to the baseline configuration. The recommendation was approved in the February 18, 2010, DAE Acquisition Decision Memorandum (ADM) which directed the program to re-baseline with updates to the Acquisition Strategy and Test & Evaluation Master Plan. |
| Nov 2008 | The 159th Combat Aviation Brigade (CAB) became the first UH-60M baseline unit deploye to a combat zone.  |
| Dec 2007 | The MY VII production contract was awarded.  |

| Jun 2007 | The Full Rate Production (FRP) decision was achieved, and the ADM signed authorizing entry into FRP for the Black Hawk Upgrade Program to include both the UH-60M and HH-60M baseline aircraft.                      |
|----------|--|
| Nov 2006 | Initial Operational Test and Evaluation (IOT&E) started on October 16, 2006 and was successfully completed four weeks ahead of schedule on November 21, 2006 with the aircraft performing well through all missions. |
| Jun 2005 | A Low-Rate Initial Production (LRIP) contract for the UH-60M baseline aircraft was awarded.  |
| Mar 2005 | The Milestone C ADM approved production of up to 40 LRIP aircraft and approval to award an Advance Procurement contract for the first lot of Full Rate Production (FRP) aircraft.                                    |
| Aug 2004 | Limited User Test (LUT) in the Systems Integration Lab (SIL) was successfully executed.  |
| Sep 2003 | The Developmental Test Pilot Familiarization Course was completed and the first flight of UH-60M Aircraft 1 was successfully conducted.  |
| Jun 2003 | The UH-60M System Critical Design Review (CDR) completed.  |
| Nov 2002 | The UH-60M System Preliminary Design Review (PDR) was held at Sikorsky in Stratford, Connecticut.  |
| Apr 2001 | Milestone B Defense Acquisition Board (DAB) approved entry into System Development and Demonstration (SDD).  |

# Schedule UH-60M Black Hawk

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

| Events  | Milestone<br>Baseline<br>Objective | Current Baseline<br>Objective/Threshold |          | Current<br>Estimate/Actual | Deviation |
|---|------------------------------------|---|----------|----------------------------|-----------|
| Milestone B                                       | Mar 2001                           | Mar 2001                                | Mar 2001 | Mar 2001                   |           |
| System Design & Development (SDD) Contract Award  | May 2001                           | May 2001                                | May 2001 | May 2001                   |           |
| System Preliminary Design Review (PDR)            | Nov 2002                           | Nov 2002                                | Nov 2002 | Nov 2002                   |           |
| System Critical Design Review (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                   |           |
| Low Rate Initial Production (LRIP) Contract Award | Mar 2005                           | Jun 2005                                | Dec 2005 | Jun 2005                   |           |
| Operational Test (OT) Start                       | Sep 2006                           | Sep 2006                                | Sep 2007 | Oct 2006                   |           |
| OT Complete                                       | Nov 2006                           | Nov 2006                                | Nov 2007 | Nov 2006                   |           |
| Full Rate Production In-Process Review (IPR)      | May 2007                           | May 2007                                | May 2008 | May 2007                   |           |
| First Unit Equipped (FUE)                         | Jan 2008                           | Jan 2008                                | Jan 2009 | Feb 2008                   |           |

Notes

No deviations for this program/subprogram

**Deviation Explanation** 

### **UNCLASSIFIED**

|                  | CI (CEI ISSII IEE |
|------------------|-------------------|
| H-60M Black Hawk | SAR DEC 2022      |
|                  |                   |

# **Performance**

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

| Performance Characteristics  |                        |                         |                      |  |           |  |
|--|------------------------|-------------------------|----------------------|--|-----------|--|
| Milestone Baseline   | Current Baseline C     | Objective/Threshold     | Current<br>Estimate  | Demonstrated<br>Performance              | Deviation |  |
| <b>Key Performance Paramete</b>  | ers (KPPs) - Aircraft  | Survivability Equip     | ment                 |  |           |  |
|  | Existing               | Existing                | Existing             | Existing                                 |           |  |
| on-KPPs - Troop Movement Airspeed (Sustained Cruise) (Knots True Air Speed / KTAS) |                        |                         |                      |  |           |  |
|  | 175                    | 145                     | 145                  | 142                                      |           |  |
| Non-KPPs - Ballistic Protec  | tion (ground fire arn  | nor piercing (mm))      |                      |  |           |  |
|  | 14.5                   | 7.62                    | 14.5                 | 14.5                                     |           |  |
| Non-KPPs - External Lift C   | Combat Radius (w/20    | min reserve) (Kilom     | eters/KM)            |  |           |  |
|  | 275                    | 135                     | 135                  | 200                                      |           |  |
| Non-KPPs - Troop Moveme  | ent Combat Radius (v   | w/20 min reserve) (K    | (ilometers/KM)       |  |           |  |
|  | 500                    | 225                     | 225.6                | 225                                      |           |  |
| <b>Key Performance Paramete</b>  | ers (KPPs) - Force Pr  | otection Armor Plat     | ing (Millimeters/MM) |  |           |  |
|  | 14.5mm                 | 7.62mm                  | 7.62mm               | 7.62mm                                   |           |  |
| Non-KPPs - Troop Moveme  | ent Internal Lift Cap  | ability (290 lbs each)  |                      |  |           |  |
|  | 11                     | 11                      | 11                   | 11                                       |           |  |
| Non-KPPs - Maintainability   | y (mhrs per flight hr) |                         |                      |  |           |  |
|  | 4.6                    | 5.4                     | 4.1                  | 2.3                                      |           |  |
| <b>Key Performance Paramete</b>  | ers (KPPs) - Net-Read  | dy                      |                      |  |           |  |
|  | All                    | All Critical            | All                  | All                                      |           |  |
| Non-KPPs - Troop Movemo  | ent One Engine Inope   | erative (KTAS)          |                      |  |           |  |
|  | 100                    | 100                     | 100                  | 100 KIAS (Knots-<br>Indicated Air Speed) |           |  |
| <b>Key Performance Paramete</b>  | ers (KPPs) - External  | Lift Payload (Pound     | ds/lbs)              |  |           |  |
|  | 10,000                 | 4,500                   | 4,888                | 4,888                                    |           |  |
| Non-KPPs - Self-Deploy Ra  | nge (nautical miles)   |                         |                      |  |           |  |
|  | 1,260                  | 1,056                   | 1,071                | TBD                                      |           |  |
| Key Performance Paramete   | ers (KPPs) - Survivab  | oility Fuel Cells (Mill | limeters/mm)         |  |           |  |
|  | 14.5mm                 | 7.62mm                  | 7.62mm               | 7.62mm                                   |           |  |
| Key Performance Paramete   | ers (KPPs) - Survivab  | oility Infrared (IR) S  | ignature             |  |           |  |
|  | Existing               | Existing                | Existing             | Existing                                 |           |  |
| Non-KPPs - Unscheduled (1  | nhrs per flight hr)    |                         |                      |  |           |  |

# **UNCLASSIFIED**

UH-60M Black Hawk SAR DEC 2022

|   | 1.3                    | 2.1        | 1.1 | 0.4 |  |
|---|------------------------|------------|-----|-----|--|
| Non-KPPs - External Vertical Rate of Climb (Feet per minute/fpm)  |                        |            |     |     |  |
|   | 500                    | 200        | 200 | 200 |  |
| Non-KPPs - Troop Moveme   | ent Vertical Rate of C | limb (fpm) |     |     |  |
|   | 750                    | 500        | 725 | 725 |  |
| Non-KPPs - Vertical Rate of Climb w/ One Engine Inoperative (fpm) |                        |            |     |     |  |
|   | 200                    | 100        | 100 | TBD |  |

# Requirement Reference

Validated: ORD dated January 29, 2007

# **Deviation Explanation**

No deviations for this program/subprogram

### Notes

None

Acquisition Budget Estimate
Does Classified Data Exist for this Data Section (Y/N)? No
Is this data CUI (Y/N)? No

### **Total Acquisition Cost**

Budget Position: President Budget (PB) Budget Year: 2024 Base Year: 2005

|             |              | Milestone<br>APB  | Current Baseline  |                   | Budget Estimate PB 2024 |            |           |
|-------------|--------------|-------------------|-------------------|-------------------|-------------------------|------------|-----------|
| Category    | Base<br>Year | Objective (BY\$M) | Objective (BY\$M) | Threshold (BY\$M) | BY\$M                   | TY\$M      | Deviation |
| RDT&E       | 2005         | \$717.5           | \$761.3           | \$837.4           | \$761.6                 | \$780.4    |           |
| Procurement | 2005         | \$16,084.2        | \$21,873.7        | \$24,061.1        | \$21,207.4              | \$26,838.2 |           |
| MILCON      | 2005         | \$0.0             | \$0.0             | \$0.0             | \$0.0                   | \$0.0      |           |
| Acq O&M     | 2005         | \$0.0             | \$0.0             | \$0.0             | \$105.1                 | \$151.5    |           |
| Total       |              | \$16,801.7        | \$22,635.0        |                   | \$22,074.1              | \$27,770.1 |           |
| PAUC        | 2005         | \$13.605          | \$16.462          | \$18.108          | \$16.054                | \$20.196   |           |
| APUC        | 2005         | \$13.109          | \$16.001          | \$17.601          | \$15.514                | \$19.633   |           |

Total End Item Ouantity

| Total Bird Rein Zudiren  |                      |                           |
|--------------------------|----------------------|---------------------------|
| <b>Quantity Category</b> | Current APB Quantity | Current Estimate Quantity |
| Development              | 8                    | 8                         |
| Procurement              | 1,367                | 1,367                     |
| O&M-Acquired             |                      |                           |

### Appropriation Category Deviation Explanations

None

#### PAUC Deviation Explanation

None

#### **APUC Deviation Explanation**

None

#### **Budget Notes**

During 2020, the FY 2022 - FY 2026 Multi-Year (MY) X quantities were revised to reflect a minimum procurement of 24 aircraft per year, nine UH-60M and 15 HH-60M Black Hawk Helicopters. As a result, nine aircraft were shifted to the out-years from FY 2023 and four aircraft were shifted from FY 2024 to the out-years.

The Acquisition O&M funding for civilian labor was moved from PEO Aviation (OA 5E) to U.S. Army Acquisition Support Center (USAASC), (OA 5X) beginning in FY 2022.

#### **Quantity Notes**

The UH-60M APO is 1,375 aircraft and consists of 1,365 aircraft that will be sustained and 10 test aircraft that are not fielded or sustained. Eight of the 10 test aircraft were acquired with RDT&E funds and two of the aircraft were acquired using a combination of APA and RDT&E funding. These 2 aircraft were taken off the production line and upgraded with RDT&E funding resulting in a total of 1,367 procurement aircraft.

The Army Acquisition Executive (AAE) approved the Black Hawk Exchange and Sales Team (BEST) program that avoids demilitarization and divestiture costs and applies both non-appropriated funding and appropriated funding proceeds received from the divestiture of non-excess, obsolete H-60 aircraft towards the procurement of replacement H-60M aircraft. The authorities and policies to execute and administer the BEST program are provided in section 503, title 40, U.S. Code and Army regulations 725-1. A total of 15 aircraft have been procured with BEST proceeds.

# **Unit Cost**

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

| Category (\$M) Base Year: 2005   | Current UCR Baseline  | Current Estimate                                       | % Change  |
|--|---|--|-----------|
| Program Acquisition Unit Cost  | -   | -  | <u> </u>  |
| Cost   | \$22,635.0  | \$22,074.1   |           |
| Quantity   | 1,375   | 1,375  |           |
| Unit Cost  | \$16.462  | \$16.054   | -2.48%    |
| Average Procurement Unit Cost  |   |  |           |
| Cost   | \$21,873.7  | \$21,207.4   |           |
| Quantity   | 1,367   | 1,367  |           |
| Unit Cost  | \$16.001  | \$15.514   | -3.04%    |
| Original 1   | UCR Baseline and Current E  | stimate (Base-Year Dollars)                            |           |
| Category (\$M) Base Year:2005  | Original UCR Baseline   | Current Estimate                                       | % Change  |
| Category (\$111) Base Tear.2003  | original cort basenite  | Current Estimate                                       | 70 Change |
| Program Acquisition Unit Cost  | C   |  | 70 Change |
| Program Acquisition Unit Cost  Cost  | \$16,801.7  | \$22,074.1<br>1,375                                    | 70 Change |
| Program Acquisition Unit Cost  | C   | \$22,074.1   | 18.00%    |
| Program Acquisition Unit Cost  Cost  Quantity  | \$16,801.7<br>1,235   | \$22,074.1<br>1,375                                    |           |
| Program Acquisition Unit Cost  Cost  Quantity  Unit Cost   | \$16,801.7<br>1,235   | \$22,074.1<br>1,375                                    |           |
| Program Acquisition Unit Cost  Cost  Quantity  Unit Cost  Average Procurement Unit Cost                        | \$16,801.7<br>1,235<br>\$13.605   | \$22,074.1<br>1,375<br>\$16.054                        |           |
| Program Acquisition Unit Cost  Cost  Quantity  Unit Cost  Average Procurement Unit Cost  Cost                  | \$16,801.7<br>1,235<br>\$13.605   | \$22,074.1<br>1,375<br>\$16.054<br>\$21,207.4          |           |
| Program Acquisition Unit Cost  Cost Quantity Unit Cost  Average Procurement Unit Cost  Cost Quantity           | \$16,801.7<br>1,235<br>\$13.605<br>\$16,084.2<br>1,227                                    | \$22,074.1<br>1,375<br>\$16.054<br>\$21,207.4<br>1,367 | 18.00%    |
| Program Acquisition Unit Cost  Cost Quantity Unit Cost  Average Procurement Unit Cost  Cost Quantity           | \$16,801.7<br>1,235<br>\$13.605<br>\$16,084.2<br>1,227<br>\$13.109<br>Cost Growth Details | \$22,074.1<br>1,375<br>\$16.054<br>\$21,207.4<br>1,367 | 18.00%    |
| Program Acquisition Unit Cost  Cost Quantity Unit Cost  Average Procurement Unit Cost  Cost Quantity Unit Cost | \$16,801.7<br>1,235<br>\$13.605<br>\$16,084.2<br>1,227<br>\$13.109<br>Cost Growth Details | \$22,074.1<br>1,375<br>\$16.054<br>\$21,207.4<br>1,367 | 18.00%    |

None

#### Original Baseline PAUC Breach Explanation

None

### Original Baseline APUC Breach Explanation

None

#### Impacts of Schedule Changes on Unit Cost

None

#### Impacts of Performance Changes on Unit Cost

None

### **Actions Taken or Proposed to Control Future Cost Growth**

None

#### Risk and Sensitivity Analysis

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

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

#### Risk and Sensitivity Analysis

#### Current Procurement Cost (December 2022)

Black Hawk Multi-Year X Contract Quantities: Potential fluctuations in yearly aircraft procurement quantities (dropping below 24 aircraft per year contract floor) will break the Multi-Year X contract and increase the likelihood of a Nunn-McCurdy breach. Significant reductions in quantities, driven by POM/PB perturbations negatively impact unit costs and production flow. Breaking the multi-year would adversely affect FMS and set a negative precedent regarding DoD multi-year contracts. Breaking the Multi-Year X contract would negatively affect Army operational readiness and FMS.

#### Revised Original Estimate (March 2005)

In December 2004, the Army changed the Acquisition Strategy in favor of UH-60M new build versus recapitalization and realigned procurement funding from modifications (Aircraft Procurement, Army Line Item AA0480/AA0492) to new build production. The Defense Acquisition Board (DAB) approved the Milestone C on March 15, 2005. The approved APB includes the UH-60M Upgrade program development, integration and qualification and the new build UH/HH-60M aircraft rather than recapitalized aircraft. The UH-60M Upgrade program includes Common Avionics Architecture System, Fly-By-Wire, and Full Authority Digital Engine Control development and integration on the UH-60M aircraft.

#### Current Baseline Estimate (June 2011)

The Configuration Steering Board recommended to the Defense Acquisition Executive (DAE) that the UH-60 Modernization Program restructure. The recommendation included three parts: 1) Produce UH-60M baseline aircraft only; 2) Complete Development Testing on Fly-By-Wire aircraft; and 3) Migrate selected technologies from the upgrade development efforts to the baseline configuration. The recommendation was approved by the DAE on February 18, 2010 in a signed Acquisition Decision Memorandum (ADM). The ADM also directed the Program to be re-baselined with updates to the Acquisition Strategy, Test & Evaluation Master Plan (TEMP) and APB as a result of this restructure. 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 and these two aircraft will not be fielded. The increase in quantities resulted in Total Procurement Cost increase over the Threshold value resulting in a Total Procurement Cost programmatic breach. The program went through the process of developing an Army Cost Position to re-baseline the program. Both the current unit costs (PAUC and APUC) are still showing a negative percent change for the past nine years indicating that risks have been managed well and the program is not sensitive any cost breaches.

| Schedule Risk |               |  |  |  |
|---------------|---------------|--|--|--|
| Other         | 10/20/2022    | H-60M Sustainment. If the Industrial base support fails to maintain necessary production efforts to support sustainment of the H-60M fleet through spares, the Black Hawk fleet may be susceptible to loss of fully mission capable aircraft in the fleet. If the Original Equipment Manufacturer (OEM) is unable to identify and manage obsolete components and the engineering qualification requirements on the platform and funds are not available when required, the H-60M fleet will realize impacts to aircraft production and readiness to the fleet. |  |  |
| Other         | 7/20/2022     | Black Hawk Multi-Year (MY) Contract Quantities: Potential fluctuations in yearly aircraft procurement quantities (dropping below 24 aircraft/year contract floor) will break the MY X contract and increases the likelihood of a Nunn-McCurdy breach.  |  |  |
|               | Technical Ris | ks   |  |  |

# **Low Rate Initial Production**

UH-60M Black Hawk
Does Classified Data Exist for this Data Section (Y/N)? No
Is this data CUI (Y/N)? No

| Item                     | Initial LRIP Decision | Current Total LRIP |
|--------------------------|-----------------------|--------------------|
| Approval Date            | 03/31/2005            | 03/31/2005         |
| <b>Approved Quantity</b> | 40                    | 40                 |
| Reference                | Milestone C ADM       | Milestone C ADM    |
| Start Year               | 2005                  | 2005               |
| End Year                 | 2007                  | 2007               |

### Rationale if quantity exceeds 10% of the total number of articles to be procured:

#### Notes

The Milestone C Acquisition Decision Memorandum (ADM) dated March 31, 2005, approved up to 40 LRIP aircraft and supported the award of an Advance Procurement Contract for the first lot of FRP aircraft.

UH-60M Black Hawk

Does Classified Data Exist for this Data Section (Y/N)? No
Is this data CUI (Y/N)? No

# **Contracts & Efforts**

| Contract Data              |   |  |  |
|----------------------------|---|--|--|
| Contract Number            | W58RGZ-22-C-0010  |  |  |
| Order Number               | N/A   |  |  |
| Latest Modification Number | P00010  |  |  |
| Award Date                 | 06/27/2022  |  |  |
| Definitization Date        | 06/26/2022  |  |  |
| Order Number               |   |  |  |
| CAGE Code/CAGE Legal Name  | 78286/Sikorsky Aircraft Corporation                           |  |  |
| Contract Title             | Black Hawk Multi-Year X                                       |  |  |
| Contract Address           | Stratford, CT   |  |  |
| Contracting Office         | Army Contracting Command - Redstone (ACC-RSA)                 |  |  |
| Supported Phase            | Production  |  |  |
| Contract Strategy          | Federal Acquisition Regulation (FAR) 15: Negotiated Contracts |  |  |
| Contract Type              | Firm-Fixed-Price  |  |  |
| Latest Modification Date   | December 01, 2022   |  |  |
| Work Start Date            | July 01, 2022   |  |  |
| Technical Data Rights      | None  |  |  |
| Work Completed             |   |  |  |

| Contracts/Effort Price, Quantity, and Performance (TY\$M) |                  |                      |                    |
|---|------------------|----------------------|--------------------|
| Initial Target Price                                      |                  | Current Target Price | )                  |
| \$2,278.6   |                  | \$2,409.2            |                    |
| Initial Ceiling Price                                     |                  | Current Ceiling Pric | e                  |
| \$2,278.6   |                  | \$2,409.2            |                    |
| Contractor EAC  |                  | PM EAC               |                    |
|   |                  |                      |                    |
| Initial Quantity  | Current Quantity |                      | Delivered Quantity |
| 120   | 122              |                      | 3                  |
| BAC   | BCWP             |                      | ACWP               |
| BCWS  | Cost Variance    |                      | Schedule Variance  |

### **UNCLASSIFIED**

UH-60M Black Hawk SAR DEC 2022

#### **Contract Notes:**

There are no Technical Data Packages (TDP) on this contract. Current Target Price: Army Total \$2,409.2M

Delivered Quantity: As of December 31, 2022, a total of 15 MY X Army aircraft (6 UH / 9 HH) were accepted.

#### Factors Contributing to Cost Variance and Projected Effects on Program Costs

This is a Firm-Fixed-Price (FFP) contract and does not have Earned Value.

#### Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

This is a Firm-Fixed-Price (FFP) contract and does not have Earned Value.

| Contract Data             |   |  |  |  |
|---------------------------|---|--|--|--|
| Contract Number           | W58RGZ-17-C-0009  |  |  |  |
| Order Number              | N/A   |  |  |  |
| Modification Number       | P00206  |  |  |  |
| Award Date                | 06/30/2017  |  |  |  |
| Definitization Date       | 06/30/2017  |  |  |  |
| Order Number              |   |  |  |  |
| CAGE Code/CAGE Legal Name | 78286/Sikorsky Aircraft Corporation                           |  |  |  |
| Contract Title            | Multi-Year (MY) IX  |  |  |  |
| Contract Address          | Stratford, CT   |  |  |  |
| Contracting Office        | Army Contracting Command - Redstone Arsenal (ACC-RSA)         |  |  |  |
| Supported Phase           | Production  |  |  |  |
| Contract Strategy         | Federal Acquisition Regulation (FAR) 15: Negotiated Contracts |  |  |  |
| Contract Type             | Firm-Fixed-Price  |  |  |  |
| Latest Modification Date  | December 16, 2021   |  |  |  |
| Work Start Date           | June 30, 2017   |  |  |  |
| Technical Data Rights     | None  |  |  |  |
| Work Completed            |   |  |  |  |

| Contracts/Effort Price, Quantity, and Performance (TY\$M) |                  |                      |                    |
|---|------------------|----------------------|--------------------|
| Initial Target Price                                      |                  | Current Target Price |                    |
| \$3,199.2   |                  | \$4,326.9            |                    |
| Initial Ceiling Price                                     |                  | Current Ceiling Pric | e                  |
| \$3,199.2   |                  | \$4,326.9            |                    |
| Contractor EAC  |                  | PM EAC               |                    |
| \$4,326.9   |                  | \$4,326.9            |                    |
| Initial Quantity  | Current Quantity |                      | Delivered Quantity |
| 217   | 301              |                      | 301                |
| BAC   | BCWP             |                      | ACWP               |
|   |                  |                      |                    |
| BCWS  | Cost Variance    |                      | Schedule Variance  |

# UNCLASSIFIED

UH-60M Black Hawk SAR DEC 2022

#### **Contract Notes:**

There are no Technical Data Packages (TDP) on this contract. Current Target Price: Army Total \$4,326.9M

Delivered Quantity: As of September 30, 2022, a total of 301 MY IX Army aircraft (220 UH / 81 HH) were accepted.

#### Factors Contributing to Cost Variance and Projected Effects on Program Costs

This is a Firm-Fixed-Price (FFP) contract and does not have Earned Value.

#### Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

This is a Firm-Fixed-Price (FFP) contract and does not have Earned Value.

# **External Government Activities**

| Activity Title |  | Government Ent | ity             | Supported Phase |
|----------------|--|----------------|-----------------|-----------------|
|                |  |                |                 |                 |
| CAGE           |  |                | Work Start Date |                 |
| City           |  |                | State/Province: |                 |
| Notes          |  |                |                 |                 |
|                |  |                |                 |                 |

# Deliveries and Expenditures

**UH-60M Black Hawk** 

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

| Deliveries                         |                 |                |                |                   |
|------------------------------------|-----------------|----------------|----------------|-------------------|
| Delivered to Date                  | Planned to Date | Actual to Date | Total Quantity | Percent Delivered |
| Development                        | 8               | 8              | 8              | 100.00%           |
| Production                         | 1,213           | 1,214          | 1,367          | 88.81%            |
| 9                                  |                 |                |                |                   |
| Total Program Quantity Delivered   | 1,221           | 1,222          | 1,375          | 88.87%            |
| Expended and Appropriated (TY \$M) |                 |                |                |                   |

Years Appropriated to date: 24

Total Years Appropriated Funding (Current Baseline): 30

Percent Years Appropriated: 80.00%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 99.57% Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 86.32%

Deliveries & Expenditures Notes:

# **Operating and Support Costs**

**UH-60M Black Hawk** 

Does Classified Data Exist for this Data Section (Y/N)? No Is this data CUI (Y/N)? No

#### **O&S** Cost Breakdown:

| Category (BY\$ Million)          | UH-60M Black Hawk<br>Upgrade |
|----------------------------------|------------------------------|
| Unit-Level Manpower              | \$16,193.9                   |
| <b>Unit Operations</b>           | \$1,807.3                    |
| Maintenance                      | \$11,416.4                   |
| Sustaining Support               | \$2,418.8                    |
| Continued System<br>Improvements | \$210.1                      |
| Other                            | \$2,950.3                    |
| Total                            | \$34,996.8                   |

Cost Estimate Source: DASA-CE ICE, June 2022

**O&S Cost Notes:** 

A total of 1,375 UH-60M aircraft will be procured. The operating and support sustainment cost is based on 1,365 fielded aircraft. The eight (8) RDT&E funded prototype aircraft and two (2) procurement/RDT&E aircraft in an upgrade configuration will not be fielded or sustained.

"Other" consists of "Indirect Support" which is comprised of Installation Support, Personnel Support, and General Training & Education.

O&S Cost Data Source: Source for O&S cost data is from most recent ICE used to support OSR.

| Total Program O&S Cost Compared with Baseline |                   |                   |                                |                                |           |
|---|-------------------|-------------------|--------------------------------|--------------------------------|-----------|
|   | Curre             | Current Baseline  |                                |                                |           |
|   | Objective (BY\$M) | Threshold (BY\$M) | Current<br>Estimate<br>(BY\$M) | Current<br>Estimate<br>(TY\$M) | Deviation |
| Total O&S                                     | \$17,652.5        | \$19,417.8        | \$34,996.8                     | \$59,377.6                     | Yes       |

Note:

The UH-60M Black Hawk APB dated June 2011 represents Operations and Maintenance (O&M) costs only and a 20-year service life. The Current Estimate reflects all O&S costs and a 25-year service life. The key difference between the Operations and Maintenance (O&M) costs and the Operations and Support (O&S) costs is that O&M costs do not include Military Personnel (MILPERS) costs.

#### **O&S Cost Deviation Explanation**

MEMO PEO AVN to ASA(AL&T): SUBJECT: Program Deviation Report H-60M Black Hawk Operating & Support (O&S) Breach, Dated: 02JUN2015 - Selected text: a. Bottom line up front: There is no cost growth to the UH-60M Black Hawk. The O&S Breach is strictly a book keeping one based on the adjustment of what is reported for O&S costs and a good news story that the Economical Useful Life (EUL) can be extended from the previously estimated 20 years to 25 years. This EUL change does not change the annual operating cost of the UH-60M Black Hawk. Source file: Program Deviation Report, available upon request.

# Operating and Support Costs - Disposal and Unitized Costs

**UH-60M Black Hawk** 

#### Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:

A total of 1,375 UH-60M aircraft will be procured. The operating and support sustainment cost is based on 1,365 fielded aircraft. The eight RDT&E funded prototype aircraft and two procurement/RDT&E aircraft in an upgrade configuration will not be fielded or sustained. "Other" consists of "Indirect Support" which is comprised of Installation Support, Personnel Support, and General Training & Education.

| Sustainment Factors        | System Name: UH-60M | Antecedent System Name: UH-60L |
|----------------------------|---------------------|--------------------------------|
| Quantity to Sustain        | 1,367               |                                |
| Unit of Measure            | Aircraft            |                                |
| Unit Expected Service Life | 25 years            |                                |

#### Base Year:

| Annual Unitized O&S Cost by<br>Category Base Year 2005 \$K | System Name: UH-60M | Antecedent System Name: UH-60L |
|--|---------------------|--------------------------------|
| Unit-Level Manpower  | 704.1               | 426.0                          |
| Unit Operations  | 78.6                | 54.0                           |
| Maintenance  | 496.4               | 285.0                          |
| Sustaining Support   | 105.2               | 0.0                            |
| Continued System Improvements                              | 9.1                 | 0.0                            |
| Other  | 128.3               | 216.0                          |
| Total O&S  | 1,521.6             | 981.0                          |

#### **Disposal/Demilitarization Cost Estimate**

| (Base Year \$Millions) | System Name: UH-60M | Antecedent System Name: UH-60L |
|------------------------|---------------------|--------------------------------|
| Total Disposal         | \$84.635            |                                |

| Cost Estimate Source - Disposal |                         |
|---------------------------------|-------------------------|
| Type:                           | Program Office Estimate |
| Approval Authority and Date:    | DASA-CE / FY22 OSR      |

#### Note:

The U.S. Army Environmental Center developed the disposal cost estimate. The estimate includes effort for pollution prevention, aircraft wash waste, painting/de-painting and Programmatic Environmental, Safety and Occupational Evaluation (PESHE).

#### Disposal Cost Notes:

#### Additional O&S Estimate Assumptions:

#### Sustainment Strategy:

The UH-60M Black Hawk follows the standard Army maintenance model of two-level maintenance, Field Maintenance Level and Sustainment Maintenance Level as defined by TC 3-04.7 (FM 3-04.500), Army Aviation Maintenance regulation. However, the training base will continue as Contractor Logistics Support. Field Maintenance and Sustainment Maintenance comes under the Army national maintenance program (NMP). Field Maintenance is performed by Combat Aviation Brigade (CAB) / Air Cavalry Services (ACS) personnel assigned to flight companies, aviation maintenance companies, and aviation support companies. Sustainment Maintenance is divided and primarily performed by three separate entities: 1) the Original Equipment Manufacturers (OEM) and contractor field service representatives; 2) Army depots located at fixed bases in the continental United States; and 3) by the national maintenance sources of repair. The total aircraft sustainment quantity of 1,365 aircraft includes the production aircraft and Black Hawk Exchange and Sales Team (BEST) aircraft. A total of 10 test aircraft are not fielded or sustained. Eight of the test aircraft were procured with RDT&E funds and two of the aircraft were procured using a combination of APA and RDT&E funding. These two aircraft were removed from the production line and upgraded using RDT&E funding.

#### Antecedent Estimate Assumptions:

The antecedent system is the UH-60L Black Hawk. The total O&S Costs for the 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 OSMIS. There are 780 UH-60L Black Hawks in the current fleet with an Economic Useful Life expectancy of 25 years.