



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-479



Combat Rescue Helicopter (CRH)

As of FY 2016 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

Combat Rescue Helicopter (CRH)

DoD Component

Air Force

Responsible Office

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 18, 2014

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 18, 2014

Mission and Description

The Combat Rescue Helicopter (CRH) system will provide Personnel Recovery (PR) forces with a vertical takeoff and landing aircraft that is quickly deployable and capable of main base and austere location operations for worldwide PR missions. CRH system activities may be required during any phase of a service/joint/coalition operation, across the full range of military operations, in any land or sea location, within the areas covered by the relevant defense planning scenarios.

The United States Air Force (USAF) has 12 Core Functions that address its unique capabilities in support of the Joint Functional Capabilities (JFC) across the full spectrum of political and military operations in all environments. The USAF has demonstrated its commitment to the Joint Force by making PR one of the 12 USAF Core Functions. The Air Force recognizes the inherent interdependence of PR, although established as an individual Core Function, with the other Core Functions as well as with the JFCs.

The CRH shall be capable of employment day or night, in adverse weather, and in a variety of threat spectrums from terrorist attacks to chemical, biological, radiological, and nuclear threats. A single pilot must be able to fly and operate all electronic/sensor weapons systems including countermeasures, leaving the second pilot to navigate, communicate, and manage mission execution. Onboard defensive capabilities will permit the CRH system to operate in an increased threat environment. An in-flight air refueling capability will provide an airborne alert capability and extend its combat mission range. The CRH system may conduct combat search and rescue airborne mission commander duties. The aircraft will be self-supporting to the maximum extent practical.

The CRH system may also conduct other collateral missions inherent in their capabilities to conduct PR, such as non-conventional assisted recovery, national emergency operations, civil search and rescue, international aid, emergency aero medical evacuation, disaster/humanitarian relief, counter drug activities, support for National Aeronautics and Space Administration flight operations, and insertion/extraction of combat forces.

Executive Summary

CRH is an ACAT ID program entering the acquisition process at the EMD phase.

The United States Air Force (USAF) CRH program addresses the need to replace the USAF's aging HH-60G Pave Hawk helicopters (air vehicles, training systems, and product support) with a new system. The CRH program will replace the aging fleet by leveraging in-production air vehicles and training systems and integrating existing technologies to acquire a new system.

The CRH contract was awarded to Sikorsky Aircraft Corporation (SAC) on June 26, 2014. Both SAC and the CRH program office have ramped up manning in the first six months of execution. In this timeframe, the program has also conducted a Program Startup Workshop, Program Management Review, and Integrated Baseline Review. The program is on track to conduct the air vehicle System Requirements Review (SRR) and System Functional Review (SFR) in April 2015 and the training system SRR/SFR in June 2015.

At Milestone B approval, four of the 2366b provisions were required to be waived by the USD(AT&L). Two of the four provisions were due to sequestration and reprogramming of funds in the FY 2015 budget process, thus (a)(1)(B) Cost/Schedule/Performance Tradeoff and (a)(1)(D) Full Funding were not able to be satisfied at the point of milestone approval. To meet these two certification provisions, the USAF realigned funding in the FY 2016 budget process to fund the program to the Milestone B SCP. Relative to the third waived provision, (a)(2), the program will satisfy the certification requirement upon completion of the Preliminary Design Review, which is scheduled to occur in April 2016. For the fourth and final waived provision, (a)(3)(D), the USD(AT&L) determined that a Technology Readiness Assessment (TRA) was not required for milestone approval based upon the maturity of the required technology. A TRA will be conducted in summer 2015 to satisfy this waived provision requirement. The USD(AT&L) will continue periodic reviews, in accordance with subsection (d)(2)(B), until a certification determination can be made for the waived provisions.

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

Threshold Breaches

APB Breaches

- Schedule
- Performance
- Cost
 - RDT&E
 - Procurement
 - MILCON
 - Acq O&M
- O&S Cost
- Unit Cost
 - PAUC
 - APUC

Nunn-McCurdy Breaches

- Current UCR Baseline**
 - PAUC None
 - APUC None
- Original UCR Baseline**
 - PAUC None
 - APUC None

Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate
Milestone B	Jun 2014	Jun 2014	Dec 2014	Jun 2014
PDR	Apr 2016	Apr 2016	Oct 2016	Apr 2016
CDR	Jul 2017	Jul 2017	Jan 2018	Jul 2017
DT&E Start	Sep 2018	Sep 2018	Mar 2019	Sep 2018
Milestone C	Oct 2019	Oct 2019	Apr 2020	Oct 2019
RAA	Sep 2020	Sep 2020	Mar 2021	Sep 2020
FRP Decision	Oct 2021	Oct 2021	Apr 2022	Oct 2021

Change Explanations

None

Notes

RAA is defined as delivery of eight production configuration aircraft (four mission & four training) with all required training devices, spares, support equipment, technical manuals, and sustainment support in place to support IOC .

Acronyms and Abbreviations

- CDR - Critical Design Review
- DT&E - Development Test & Evaluation
- PDR - Preliminary Design Review
- RAA - Required Assets Available

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold	Demonstrated Performance	Current Estimate	
Hover Performance				
A combat configured HH-60 Recap with SCL shall have an OGE hover capability at mid-mission gross weights at 6,000' PA, 35°C.	A combat configured HH-60 Recap with SCL shall have an OGE hover capability at mid-mission gross weights at 6,000' PA, 35°C.	A combat configured HH-60 Recap with SCL shall have an OGE hover capability at mid-mission gross weights at 4,000' PA, 35°C.	TBD	A combat configured HH-60 Recap with SCL shall have an OGE hover capability at mid-mission gross weights at 4,000' PA, 35°C.
Survivability				
(Objective= Threshold) HH-60 Recap aircraft shall provide vulnerability reduction at least equal to existing HH-60G vulnerability reduction features - protection for the pilot, copilot and all flight critical components or subsystems against ground-fired 7.62 mm armor piercing projectiles at 100 meters.	(Objective= Threshold) HH-60 Recap aircraft shall provide vulnerability reduction at least equal to existing HH-60G vulnerability reduction features - protection for the pilot, copilot and all flight critical components or subsystems against ground-fired 7.62 mm armor piercing projectiles at 100 meters.	HH-60 Recap aircraft shall provide vulnerability reduction at least equal to existing HH-60G vulnerability reduction features - protection for the pilot, copilot and all flight critical components or subsystems against ground-fired 7.62 mm armor piercing projectiles at 100 meters.	TBD	HH-60 Recap aircraft shall provide vulnerability reduction at least equal to existing HH-60G vulnerability reduction features - protection for the pilot, copilot and all flight critical components or subsystems against ground-fired 7.62 mm armor piercing projectiles at 100 meters.
Force Protection				
Pilot and copilot seating to 14.5 mm AP projectiles at 500 meters. Walls around the primary cabin crew member positions and the entire cabin floor to 14.5 mm AP at 500 meters.	Pilot and copilot seating to 14.5 mm AP projectiles at 500 meters. Walls around the primary cabin crew member positions and the entire cabin floor to 14.5 mm AP at 500 meters.	Pilot and copilot seating will incorporate ballistic hardening to defeat 7.62 mm AP projectiles at 100 meters. The cabin walls around the primary cabin crew member positions and the entire cabin floor will have the capability to defeat 7.62 mm AP projectiles at 100 meters.	TBD	Pilot and copilot seating will incorporate ballistic hardening to defeat 7.62 mm AP projectiles at 100 meters. The cabin walls around the primary cabin crew member positions and the entire cabin floor will have the capability to defeat 7.62 mm AP projectiles at 100 meters
Net Ready				
Execution of all operational activities and information	Execution of all operational activities and information	The capability, system, and/or service shall fully support execution of	TBD	The capability, system, and/or service shall fully support execution of

exchanges identified and information assurance requirements including availability, integrity, authentic-ation, confident-iality, and non -repudiation, and issuance of an ATO by the DAA.	exchanges identified and information assurance requirements including availability, integrity, authentic-ation, confident-iality, and non-repudiation, and issuance of an ATO by the DAA.	joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated DoDAF content, and shall satisfy the technical requirements for transition to Net-Centric military operations. Issuance of an IATO or ATO by the DAA.		joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated DoDAF content, and shall satisfy the technical requirements for transition to Net-Centric military operations. Issuance of an IATO or ATO by the DAA.
Sustainment (Material Availability)				
(Objective= Threshold) MC rate of 83 percent at IOC	(Objective= Threshold) MC rate of 83 percent at IOC	MC rate of 83 percent at IOC	TBD	MC rate of 83 percent at IOC
System Training Process				
(Objective= Threshold) HH-60 Recap shall provide operations and maintenance training systems	(Objective= Threshold) HH-60 Recap shall provide operations and maintenance training systems	HH-60 Recap shall provide operations and maintenance training systems	TBD	HH-60 Recap shall provide operations and maintenance training systems

Requirements Reference

Capability Development Document (CDD) for HH-60 Recapitalization Aircraft dated July 6, 2010
 CDD Supplement for HH-60 Recapitalization Aircraft dated July 20, 2012

Change Explanations

None

Notes

CRH referred to as HH-60 Recap in CDD.

Acronyms and Abbreviations

AP - Armor Piercing
ATO - Authorization to Operate
C - Celsius
DAA - Designated Accrediting Authority
DoDAF - Department of Defense Air Force
IATO - Interim Authorization to Operate
MC - Mission Capable
mm - Millimeter
OGE - Out of Ground Effect
PA - Pressure Altitude
SCL - Standard Combat Load

Track to Budget

RDT&E

Appn	BA	PE
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Air Force 3600 05 0605229F

Project	Name
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654364 Combat Rescue Helicopter

Procurement

Appn	BA	PE
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Air Force 3010 04 0207229F

Line Item	Name
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10HHX0 Combat Rescue Helicopter

MILCON

Appn	BA	PE
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Air Force 3300 01 0207229F

Project	Name
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VARIOUS Combat Rescue Helicopter Simulator

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2014 \$M			BY 2014 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	1958.8	1958.8	2154.7	1972.9	2118.6	2118.6	2105.9
Procurement	6108.4	6108.4	6719.2	6181.9	7708.7	7708.7	7708.7
Flyaway	--	--	--	4516.4	--	--	5643.9
Recurring	--	--	--	4488.8	--	--	5611.7
Non Recurring	--	--	--	27.6	--	--	32.2
Support	--	--	--	1665.5	--	--	2064.8
Other Support	--	--	--	1266.8	--	--	1568.3
Initial Spares	--	--	--	398.7	--	--	496.5
MILCON	23.7	23.7	26.1	23.8	28.9	28.9	28.9
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	8090.9	8090.9	N/A	8178.6	9856.2	9856.2	9843.5

Current APB Cost Estimate Reference

Service Cost Position (SCP) dated June 18, 2014

Confidence Level

Confidence Level of cost estimate for current APB: 61%

The Service Cost Position represents the expected value for both the Research, Development, Test and Evaluation (RDT&E) and production estimates. This portion of the estimate takes into consideration relevant risks, including ordinary levels of external and unforeseen events. It aims to provide sufficient resources to execute the program under normal conditions encountering average levels of technical, schedule and programmatic risk.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	9	9	9
Procurement	103	103	103
Total	112	112	112

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY\$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	377.4	100.0	156.1	422.5	457.9	415.4	135.0	41.6	2105.9
Procurement	0.0	0.0	0.0	0.0	0.0	89.6	628.0	6991.1	7708.7
MILCON	0.0	0.0	0.0	0.0	7.3	2.8	0.0	18.8	28.9
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2016 Total	377.4	100.0	156.1	422.5	465.2	507.8	763.0	7051.5	9843.5
	--	--	--	--	--	--	--	--	--

Funding Notes

Program full funding is resolved in the FY 2016 PB.

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	9	0	0	0	0	0	0	0	0	9
Production	0	0	0	0	0	0	0	8	95	103
PB 2016 Total	9	0	0	0	0	0	0	8	95	112
	--	--	--	--	--	--	--	--	--	--

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2012	--	--	--	--	--	--	11.1
2013	--	--	--	--	--	--	32.8
2014	--	--	--	--	--	--	333.5
2015	--	--	--	--	--	--	100.0
2016	--	--	--	--	--	--	156.1
2017	--	--	--	--	--	--	422.5
2018	--	--	--	--	--	--	457.9
2019	--	--	--	--	--	--	415.4
2020	--	--	--	--	--	--	135.0
2021	--	--	--	--	--	--	21.4
2022	--	--	--	--	--	--	20.2
Subtotal	9	--	--	--	--	--	2105.9

Annual Funding							
3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2014 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2012	--	--	--	--	--	--	11.3
2013	--	--	--	--	--	--	32.9
2014	--	--	--	--	--	--	329.4
2015	--	--	--	--	--	--	97.5
2016	--	--	--	--	--	--	149.7
2017	--	--	--	--	--	--	397.7
2018	--	--	--	--	--	--	422.8
2019	--	--	--	--	--	--	376.0
2020	--	--	--	--	--	--	119.8
2021	--	--	--	--	--	--	18.6
2022	--	--	--	--	--	--	17.2
Subtotal	9	--	--	--	--	--	1972.9

Annual Funding								
3010 Procurement Aircraft Procurement, Air Force								
Fiscal Year	Quantity	TY \$M						Total Program
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support		
2019	--	--	--	--	--	89.6	89.6	
2020	8	475.5	--	24.2	499.7	128.3	628.0	
2021	10	568.1	--	8.0	576.1	343.8	919.9	
2022	14	735.6	--	--	735.6	234.8	970.4	
2023	14	745.6	--	--	745.6	286.9	1032.5	
2024	14	757.6	--	--	757.6	275.7	1033.3	
2025	14	760.0	--	--	760.0	214.4	974.4	
2026	14	768.3	--	--	768.3	219.6	987.9	
2027	15	801.0	--	--	801.0	270.6	1071.6	
2028	--	--	--	--	--	1.1	1.1	
Subtotal	103	5611.7	--	32.2	5643.9	2064.8	7708.7	

Annual Funding								
3010 Procurement Aircraft Procurement, Air Force								
Fiscal Year	Quantity	BY 2014 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2019	--	--	--	--	--	78.7	78.7	
2020	8	409.7	--	20.8	430.5	110.6	541.1	
2021	10	479.9	--	6.8	486.7	290.3	777.0	
2022	14	609.2	--	--	609.2	194.4	803.6	
2023	14	605.3	--	--	605.3	233.0	838.3	
2024	14	603.0	--	--	603.0	219.5	822.5	
2025	14	593.1	--	--	593.1	167.3	760.4	
2026	14	587.8	--	--	587.8	168.0	755.8	
2027	15	600.8	--	--	600.8	202.9	803.7	
2028	--	--	--	--	--	0.8	0.8	
Subtotal	103	4488.8	--	27.6	4516.4	1665.5	6181.9	

Annual Funding 3300 MILCON Military Construction, Air Force	
Fiscal Year	TY \$M
	Total Program
2018	7.3
2019	2.8
2020	--
2021	2.9
2022	4.5
2023	2.2
2024	--
2025	6.5
2026	2.7
Subtotal	28.9

Annual Funding 3300 MILCON Military Construction, Air Force	
Fiscal Year	BY 2014 \$M
	Total Program
2018	6.5
2019	2.4
2020	--
2021	2.4
2022	3.7
2023	1.8
2024	--
2025	5.0
2026	2.0
Subtotal	23.8

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	6/18/2014	6/18/2014
Approved Quantity	18	18
Reference	Milestone B ADM	Milestone B ADM
Start Year	2019	2019
End Year	2021	2021

The Current Total LRIP Quantity is more than 10% of the total production quantity due to 18 aircraft being the minimum quantity necessary to establish an initial production base for the system as permitted by section 2400 of title 10, United States Code, subsection (b).

The APB was approved based on six full-rate production lots. The relatively small total quantity of aircraft produced will require an LRIP quantity of more than 10 percent. There is an approved LRIP quantity of 18 aircraft.

Foreign Military Sales

None

Nuclear Costs

None

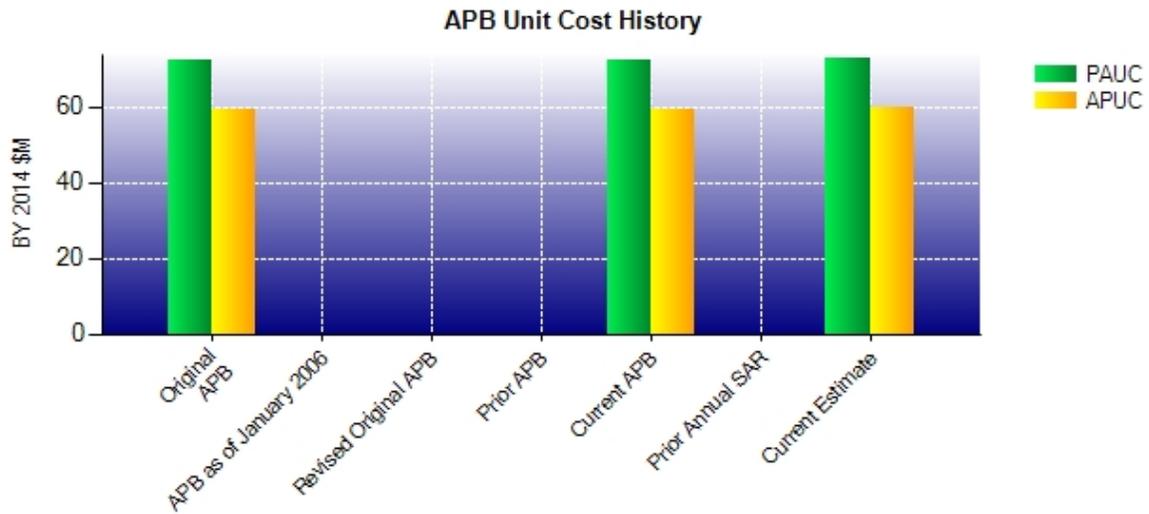
Unit Cost

Unit Cost Report

Item	BY 2014 \$M	BY 2014 \$M	% Change
	Current UCR Baseline (Jun 2014 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	8090.9	8178.6	
Quantity	112	112	
Item	72.240	73.023	+1.08
Average Procurement Unit Cost			
Cost	6108.4	6181.9	
Quantity	103	103	
Unit Cost	59.305	60.018	+1.20

Item	BY 2014 \$M	BY 2014 \$M	% Change
	Original UCR Baseline (Jun 2014 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	8090.9	8178.6	
Quantity	112	112	
Unit Cost	72.240	73.023	+1.08
Average Procurement Unit Cost			
Cost	6108.4	6181.9	
Quantity	103	103	
Unit Cost	59.305	60.018	+1.20

Unit Cost History



Item	Date	BY 2014 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jun 2014	72.240	59.305	88.002	74.842
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	Jun 2014	72.240	59.305	88.002	74.842
Prior Annual SAR	N/A	N/A	N/A	N/A	N/A
Current Estimate	Dec 2014	73.023	60.018	87.888	74.842

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
88.002	-1.016	0.000	0.000	0.000	0.683	0.000	0.219	-0.114	87.888

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
74.842	-0.890	0.000	0.000	0.000	0.652	0.000	0.238	0.000	74.842

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Jun 2014	N/A	Jun 2014
Milestone C	N/A	Oct 2019	N/A	Oct 2019
IOC	N/A	Sep 2020	N/A	Sep 2020
Total Cost (TY \$M)	N/A	9856.2	N/A	9843.5
Total Quantity	N/A	112	N/A	112
PAUC	N/A	88.002	N/A	87.888

Required Assets Available is used in lieu of IOC and is defined as delivery of eight production configuration aircraft (four mission & four training) with all required training devices, spares, support equipment, technical manuals, and sustainment support in place to support IOC.

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	2118.6	7708.7	28.9	9856.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	--	--	--
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	-21.9	-91.7	-0.1	-113.7
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+9.2	+67.2	+0.1	+76.5
Other	--	--	--	--
Support	--	+24.5	--	+24.5
Subtotal	-12.7	--	--	-12.7
Total Changes	-12.7	--	--	-12.7
CE - Cost Variance	2105.9	7708.7	28.9	9843.5
CE - Cost & Funding	2105.9	7708.7	28.9	9843.5

Summary BY 2014 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	1958.8	6108.4	23.7	8090.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	--	--	--
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+14.1	+53.8	+0.1	+68.0
Other	--	--	--	--
Support	--	+19.7	--	+19.7
Subtotal	+14.1	+73.5	+0.1	+87.7
Total Changes	+14.1	+73.5	+0.1	+87.7
CE - Cost Variance	1972.9	6181.9	23.8	8178.6
CE - Cost & Funding	1972.9	6181.9	23.8	8178.6

Previous Estimate: June 2014

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-21.9
Revised estimate to reflect the application of new out-year escalation indices. (Estimating)	+12.4	+7.5
Adjustment for current and prior escalation. (Estimating)	+1.7	+1.7
RDT&E Subtotal	+14.1	-12.7

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-91.7
Revised estimate to reflect the application of new out-year escalation indices. (Estimating)	+53.8	+67.2
Revised Other Support estimate to reflect the application of new out-year escalation indices. (Support)	+15.0	+18.7
Revised Initial Spares estimate to reflect the application of new out-year escalation indices. (Support)	+4.7	+5.8
Procurement Subtotal	+73.5	0.0

MILCON	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.1
Revised estimate to reflect the application of new out-year escalation indices. (Estimating)	+0.1	+0.1
MILCON Subtotal	+0.1	0.0

Contracts

General Notes

Estimated Price at Completion if all CLIN options over 15 years are executed is \$7.9B (at target).

Contract Identification

Appropriation: RDT&E
Contract Name: Combat Rescue Helicopter
Contractor: Sikorsky Aircraft Corp.
Contractor Location: 6900 Main Street
 Stratford, CT 06614
Contract Number: FA8629-14-C-2403
Contract Type: Fixed Price Incentive(Firm Target) (FPIF), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)
Award Date: June 26, 2014
Definitization Date: June 26, 2014

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1277.6	1380.0	N/A	1277.6	1380.0	N/A	1277.6	1277.6

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2014)	-1.4	-3.5
Previous Cumulative Variances	0.0	0.0
Net Change	-1.4	-3.5

Cost and Schedule Variance Explanations

The unfavorable cumulative cost variance is due to greater effort being expended than anticipated in the baseline.

The unfavorable cumulative schedule variance is due to staffing, training and resource allocation.

Notes

At contract award:

- Initial Contract Price: \$1,277,618,606 (Face Value of Contract)
- Target Price: CLINs 0001 and 0002: \$1,261,176,821
- Ceiling Price: CLINs 0001 and 0002: \$1,363,590,492
- FFP: CLIN 0006: \$16,441,785

EMD: \$1,501,556,957

LRIP: \$1,155,870,141

FRP: \$5,253,672,404

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	9	0.00%
Production	0	0	103	0.00%
Total Program Quantity Delivered	0	0	112	0.00%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	9843.5	Years Appropriated	4
Expended to Date	22.6	Percent Years Appropriated	23.53%
Percent Expended	0.23%	Appropriated to Date	477.4
Total Funding Years	17	Percent Appropriated	4.85%

The above data is current as of January 31, 2015.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	June 18, 2014
Source of Estimate:	SCP
Quantity to Sustain:	112
Unit of Measure:	Aircraft
Service Life per Unit:	27.00 Years
Fiscal Years in Service:	FY 2020 - FY 2054

Sustainment Strategy

The Product Support Strategy for CRH is 2-level maintenance, organic at both Organizational and Depot levels. The prime contractor, Sikorsky Aircraft Corporation, will develop, implement and maintain an Integrated Logistic Support (ILS) Plan in conjunction with the Program Office.

- Primary Aerospace Vehicle Inventory (PAI): 91
- Mission Capability Goal: 83%
- Materiel Availability Goal: 67.4%
- Mean Time Between Critical Failure Goal: ≥ 28.5 hours
- Mean Time Between Maintenance Goal: ≥ 0.30 hours
- Mean Down Time Goal: ≥ 20.8 hours
- Service Life: 8,000 hour life

Antecedent Information

(As of May 1, 2014)

- HH-60G
- Total Quantity: 97
- PAI: 87
 - Note: 21 Operational Loss Replacement (OLR) aircraft are not included, currently being acquired. Anticipate additional HH-60G aircraft retirements due to excessive flying hours.
 - The HH-60Us are not included
- Mission Capability Rate: 73.4%
- Materiel Availability Rate: 57.1%
- Mean Time Between Critical Failure Rate: 15.4 hrs
- Mean Time Between Maintenance Rate: 0.18 hrs
- Mean Down Time Rate: 21.4 hrs

CRH costs shown in comparison to the antecedent system, HH-60G, reflect estimated average annual cost per primary authorized aircraft (PAA). The HH-60G was normalized for comparison to the CRH to reflect programmatic differences and estimating methodologies. The cost per PAA of the HH-60G was projected using Air Force Total Ownership Cost (AFTOC) system historical data. Costs for the HH-60G were normalized to reflect the CRH assumption of 360 annual flying hours per aircraft. This cost comparison excludes Indirect Support costs for the HH-60G antecedent system because the costs captured in the AFTOC database are incomplete and do not provide a meaningful comparison to those estimated for CRH.

Annual O&S Costs BY2014 \$M			
Cost Element	CRH		HH-60G (Antecedent)
	Average Annual Cost Per Aircraft		Average Annual Cost Per Aircraft
Unit-Level Manpower	3.100		3.500
Unit Operations	1.100		1.000
Maintenance	2.600		2.600
Sustaining Support	0.500		0.300
Continuing System Improvements	0.700		0.600
Indirect Support	1.500		--
Other	--		--
Total	9.500		8.000

CRH average annual cost per aircraft assumes full funding of program requirements (unconstrained), whereas the HH-60G reflects projected actual costs reported in the AFTOC system (constrained). Also, the cost of extending the life of the HH-60G is not reflected. The comparison is not adjusted for any capability differences, costs savings or efficiencies that may exist between the two systems.

Item	Total O&S Cost \$M			
	CRH		HH-60G (Antecedent)	
	Current Development APB Objective/Threshold	Current Estimate		
Base Year	24529.5	26982.5	24529.5	N/A
Then Year	40982.5	N/A	40982.5	N/A

Equation to Translate Annual Cost to Total Cost

The CRH O&S annual unitized cost of \$9.5M is calculated based on a steady state PAA fleet of 91 aircraft beginning in FY30 and ending in FY43. It is not possible to extrapolate this cost to a total O&S cost as it does not capture ramp up (FY20-29) or ramp down (FY44-54) years.

O&S Cost Variance		
Category	BY 2014 \$M	Change Explanations
Prior SAR Total O&S Estimates - Jun 2014 SAR	24529.5	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	24529.5	

Disposal Estimate Details

Date of Estimate: June 18, 2014
Source of Estimate: SCP
Disposal/Demilitarization Total Cost (BY 2014 \$M): Total costs for disposal of all Aircraft are 29.3

TY\$M: 76.2 (Total Cost)