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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605229F / HH-60W
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	1,929.356	53.363	58.974	48.268	0.000	48.268	42.220	33.219	99.325	85.939	69.600	2,420.264
654364: <i>Combat Rescue Helicopter</i>	1,929.356	53.363	58.974	48.268	0.000	48.268	42.220	33.219	99.325	85.939	69.600	2,420.264
Quantity of RDT&E Articles	10	-	-	-	-	-	-	-	-	-	-	-

Program MDAP/MAIS Code: 479

A. Mission Description and Budget Item Justification

The HH-60W program will replace the aging HH-60G. The HH-60G currently supports the Air Force's core function of Personnel Recovery. The primary mission of the HH-60G is to conduct day / night / marginal weather Combat Search and Rescue (CSAR) in order to recover downed aircrew or other isolated personnel in hostile or non-permissive environments.

The HH-60W will be capable of employment day or night, in adverse weather, and across the full spectrum of threats to include chemical, biological, radiological, and nuclear. On-board defensive capabilities will permit the HH-60W system to operate with less risk than legacy systems in an increased threat environment. An in-flight air refueling capability will provide an airborne alert capability and extend its combat mission range. The HH-60W system is capable of conducting combat search and rescue airborne mission commander duties. The aircraft will be self-supporting to the maximum extent practical. The HH-60W system may also conduct other collateral missions inherent in their capabilities to conduct Personnel Recovery, such as non-conventional assisted recovery, non-conventional evacuation operations, defense support to civil authorities, civil search and rescue, international aid, emergency aeromedical evacuation, disaster/humanitarian relief, counter-drug activities, support for National Aeronautics and Space Administration flight operations, and insertion/extraction of combat forces.

The HH-60W development program procured a total of ten aircraft as follows: four Engineering, Manufacturing, and Development (EMD) aircraft, five System Demonstration Test Article (SDTA) aircraft, and one modernization flight test aircraft. The FY20 PB added the modernization flight test aircraft. The HH-60W program office will procure necessary ground and flight assets required for both Development Test (DT) and Initial Operational Test & Evaluation (IOT&E). The HH-60W EMD program includes development of the complete HH-60W training system to include HH-60W Weapon System Trainer (WST), Operational Flight Trainer (OFT), Airframe Systems Trainer (AST), Avionics Desktop Trainer (AVDTT), other training devices, with associated spares and support equipment, as well as courseware required to perform flight, aircrew and maintenance training. Other development efforts include a systems integration laboratory, an avionics integration support facility, procurement of data rights and licenses, spares, aircraft, Government test, product support and program support costs (PSC). The HH-60W program will also pursue modernization efforts to develop and integrate enhancements in mission/defensive systems and additional system upgrades to address critical capability gaps. The program office will utilize the additional flight test aircraft in support of modernization efforts to address emerging threats and evolving mission needs.

The Delta Training Device (DTD) effort will procure additional training assets, including but not limited to, maintenance and aircrew Crew Chief Part Task Trainers (CCPTT), aircrew Hoist Procedural Trainers (HPT), Virtual Reality (VR)/Mixed Reality (MR) maintenance aircrew trainers, associated spares and support equipment, as well as Type 1 training.

UNCLASSIFIED

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Capability upgrades and modernization development efforts for the HH-60W may include, but are not limited to, the following priorities: Situational Awareness Data Link/ Automatic Direction Finder (SADL/ADF) Removal, Directional Infrared Countermeasures (DIRCM), Electro Optical/Infrared (EO/IR) Tactical Overlay, Global Positioning System Anti-Jam/Anti-Spoof (GPS-AJ), Degraded Visual Environment (DVE) system, Integrated Vehicle Health Monitoring System Control (IVHMS), Video Data Link (VDL), Radio Frequency Jammer (RF-Jammer), Mobile User Objective System (MUOS), Electronic Flight Bags, and Automated Dependent Surveillance Broadcast - In Device. Capability upgrades and modernization also supports inclusion for mandates, system enhancements, hardware and software changes for diminishing manufacturing sources and material shortages as well as Deficiency Report Resolutions. In addition, studies, development, prototyping, testing and integration of emerging technology and support equipment opportunities to increase the effectiveness of the platform are considered in capability upgrades and modernization initiatives.

The HH-60W program funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/ demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver HH-60W weapon system capability. The use of such program's funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022 \$2.961M was expended for civilian pay expenses in this program element, and in FY 2023, \$5.492M is forecasted for civilian pay expenses in this program element.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	62.255	58.974	26.368	0.000	26.368
Current President's Budget	53.363	58.974	48.268	0.000	48.268
Total Adjustments	-8.892	0.000	21.900	0.000	21.900
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-7.000	0.000			
• SBIR/STTR Transfer	-1.892	0.000			
• Other Adjustments	0.000	0.000	21.900	0.000	21.900

UNCLASSIFIED

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<p>Change Summary Explanation</p> <p>FY 2022 funding was reduced by \$7.0 million due to capability upgrades/modernization schedule changes and other Air Force priorities and reduced by \$1.892 million for Small Business Innovation Research (SBIR).</p> <p>FY 2024 funding increased by \$21.9 million due to program re-phase for Capability Upgrades/Modernization schedule changes.</p>				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>Title: HH-60W Development</p> <p>Description: Develop a new helicopter, associated training system and support elements that leverage fielded, non-developmental technologies to recapitalize the HH-60G fleet.</p> <p>FY 2023 Plans: Final award for tactical cross domain solution and modern air combat environment to include but not limited to developing and integrating mission/defensive systems and conduct required testing, training and integration and engineering, product support data analysis efforts and program support costs. Lab and flight testing of software baseline was designed and developed in FY2022 and FY2023.</p> <p>Continue funding for Civilian Pay and SBIR support in FY23.</p> <p>FY 2024 Plans: Costs have mostly transitioned to capability upgrades. Development costs include continued funding for Civilian Pay and SBIR Support</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased due to final award of tactical cross-domain solution and modern air combat environment in FY 2023. Only Civilian Pay and SBIR are included in FY 2024 Development Costs.</p>		12.911	17.132	7.159
<p>Title: HH-60W Government Test and Evaluation</p> <p>Description: Conduct test and evaluation on the HH-60W and associated training systems to support DT&E, IOT&E, Live Fire Test and Evaluation (LFT&E), and other test planning and organizational support.</p> <p>FY 2023 Plans: Continue developmental and operational test for Capability Upgrades program and Cybersecurity.</p> <p>FY 2024 Plans: Continue developmental and operational test for Capability Upgrades program.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p>		1.044	4.000	3.117

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Funding decreased due to reduced Cybersecurity testing efforts.			
Title: Capability Upgrades & Modernization Description: Modernize the HH-60W fleet by studying, prototyping, testing and integrating developmental and non-developmental technologies into the platform, including electro-optical infrared technology imaging system. FY 2023 Plans: Continue modernization efforts to include prioritized capabilities, software release process, mandates, diminishing manufacturing sources and material shortages, Deficiency Report Resolutions, Operational Flight Programs, studies, prototyping testing and integration of emerging technologies, carry-on equipment, EO/IR, DVE test equipment, DIRCM capabilities and support equipment opportunities. FY 2024 Plans: Continue modernization efforts to include prioritized capabilities, mandates, diminishing manufacturing sources and material shortages, Deficiency Report Resolutions, Operational Flight Programs, studies, prototyping testing and integration of emerging technologies, carry-on equipment, GPS-Antijam, DAIRCM T-1 capabilities and support equipment opportunities. FY 2023 to FY 2024 Increase/Decrease Statement: Funding increased due to increased GPS-Antijam efforts and economic adjustments.	39.408	37.842	37.992
Accomplishments/Planned Programs Subtotals	53.363	58.974	48.268

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• MILCON Line Item 0207229F: <i>Combat Rescue Helicopter</i>	0.000	24.395	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	24.395
• APAF 04 Line Item H060WH: <i>Combat Rescue Helicopter</i>	711.777	1,205.995	282.533	-	282.533	162.385	54.570	0.000	0.000	0.000	2,417.260
• APAF 06 Line Item H060WH: <i>Combat Rescue Helicopter</i>	76.937	119.768	0.000	-	0.000	1.855	2.334	2.393	2.430	0.000	205.717
• APAF 05 Line Item H060WM: <i>HH60W Modifications</i>	0.000	3.083	0.000	-	0.000	51.863	68.326	67.174	68.368	0.000	258.814

Remarks

UNCLASSIFIED

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E. Acquisition Strategy Procure a new helicopter and associated training systems, and support elements that leverage fielded non-developmental technologies to recapitalize the HH-60G fleet. Under the development effort, the HH-60W program procured a total of ten aircraft as follows: four Engineering, Manufacturing, and Development (EMD) aircraft, five System Demonstration Test Article (SDTA) aircraft, and one modernization flight test aircraft. The FY20 PB added the modernization flight test aircraft. The HH-60W program office will procure necessary ground and flight assets required for both Development Test (DT) and Initial Operational Test & Evaluation (IOT&E). The main HH-60W program includes development of the complete HH-60W system to include delivery of ten aircraft, associated training systems to include WST, OFT, AVDTT, AST, other Part Task Trainers, associated spares and support elements/equipment, as well as Type 1 training and courseware required to perform flight, aircrew and maintenance training. An additional prime contract was awarded to develop and acquire additional training devices. Other efforts include, but are not limited to development of a systems integration laboratory and an avionics integration support facility, as well as procurement of data rights and licenses, spares, product support and program support costs for the EMD effort. The HH-60W modernization effort will maximize, where possible, opportunities for production line cut-in to minimize the amount of future post-production modifications needed. The current contract types for this effort are predominantly Fixed Price. As originally planned following source selection, a formal HH-60W Training System Requirements Analysis (TSRA) was completed in Sep 2015. This analysis identified additional training requirements not accounted for in the original contract. A subsequent TSRA review incorporating the latest annual Ready Aircrew Program (RAP) Tasking Memorandum (RTM) clarified the additional training requirements to increase the research and development of training devices and courseware. These additional training devices, associated spares, support equipment, Type 1 Training and initial contractor support were competitively awarded in Aug 18.		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605229F / HH-60W	Project (Number/Name) 654364 / Combat Rescue Helicopter
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
HH-60W aircraft development, integration, test articles, trainers, support and contractor test	C/FPIF	Sikorsky Aircraft Corporation : Stratford, CT	1,692.926	6.525	Mar 2023	4.674	Jan 2024	-		-		-	0.000	1,704.125	-
Acquisition of additional HH-60W training devices	C/FFP	Various : TBD	33.622	1.734	Jul 2022	4.000	May 2023	-		-		-	0.000	39.356	-
HH-60W Capability Upgrades and Modernization- New IDIQ Contract	C/FPIF	Sikorsky Aircraft Corp : Stratford, CT	58.545	39.408	Oct 2022	37.842	Jun 2023	37.992	Jun 2024	-		37.992	222.791	396.578	-
Subtotal			1,785.093	47.667		46.516		37.992		-		37.992	222.791	2,140.059	N/A

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
HH-60W product support related to aircraft development, integration, test articles, trainers and contractor test	Various	Various : TBD	55.495	1.691	Nov 2022	2.966	Mar 2023	1.767	Jan 2024	-		1.767	9.542	71.461	-
Direct Cite Civ Pay	Various	AFLCMC : TBD	0.000	2.961	Oct 2022	5.492	May 2023	5.392	May 2024	-		5.392	6.500	20.345	-
Subtotal			55.495	4.652		8.458		7.159		-		7.159	16.042	91.806	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
HH-60W planning and testing to support developmental and operational test, live fire test and other weapon system testing and support	PO	413th Test Squadron : Eglin AFB, FL	49.842	1.044	Jun 2022	4.000	Mar 2023	3.117	Jan 2024	-		3.117	21.870	79.873	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605229F / HH-60W	Project (Number/Name) 654364 / Combat Rescue Helicopter
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Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			49.842	1.044		4.000		3.117		-		3.117	21.870	79.873	N/A

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
HH-60W A&AS Support	C/CPFF	EPASS : Dayton, OH	28.761	-		-		-		-		-	0.000	28.761	-
HH-60W Other Program Support Costs	Various	Various : Various	10.165	-		-		-		-		-	0.000	10.165	-
Subtotal			38.926	-		-		-		-		-	0.000	38.926	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,929.356	53.363	58.974	48.268	-	48.268	260.703	2,350.664	N/A

Remarks
 FINANCIAL PERFORMANCE: HH-60W is evaluated against traditional Research and Development (R&D) program expenditure benchmarks. Unlike many traditional R&D programs, however, the HH-60W EMD contract is primarily a FPIF contract with progress payments. Ten percent (10%) of incurred costs are withheld until the end of the contract, when they are liquidated. Mandatory funding obligations, progress payment restrictions and DFAS withholds will cause the program to lag traditional expenditure benchmarks, painting an inaccurate portrait of overall program health.

FY20+: Transitioned Management Services to APAF.

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605229F / HH-60W	Project (Number/Name) 654364 / Combat Rescue Helicopter
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

HH-60W	
HH-60W EMD Development	
HH-60W CRH Training System EMD Development	
HH-60W Test and Evaluation	
Developmental Test and Evaluation	
Capability Upgrades and Modernization	
Required Assets Available for Initial Operational Capability	■

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605229F / HH-60W	Project (Number/Name) 654364 / Combat Rescue Helicopter

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
HH-60W				
HH-60W EMD Development	1	2022	2	2024
HH-60W CRH Training System EMD Development	1	2022	3	2023
HH-60W Test and Evaluation	1	2022	4	2028
Developmental Test and Evaluation	1	2022	4	2022
Capability Upgrades and Modernization	1	2022	4	2028
Required Assets Available for Initial Operational Capability	2	2022	2	2022

Note
Capability Upgrades end date projected into FY 2029.