



April 2020

PRESIDENTIAL HELICOPTER

Program is Meeting
Cost Goals but Some
Technical and
Schedule Risks
Remain

GAO Highlights

Highlights of [GAO-20-356](#), a report to congressional committees

Why GAO Did This Study

The mission of the presidential helicopter fleet is to provide safe, reliable, and timely transportation in support of the President. The Navy plans to acquire a fleet of 23 VH-92A helicopters to replace the current Marine Corps fleet which has been in use for more than 40 years. Delivery of production VH-92A helicopters is scheduled to begin in April 2021 and be completed in January 2023.

The National Defense Authorization Act of 2014 included a provision for GAO to report annually on the acquisition of the VH-92A helicopter. This report, GAO's sixth related to the provision, examines (1) the extent to which the program is meeting cost goals and (2) performance and schedule challenges that the program has experienced.

To conduct this work, GAO compared the Navy's April 2019 cost estimates for acquiring and maintaining the new helicopters and October 2019 program schedule information to its April 2014 acquisition baseline. GAO reviewed development test results and status reports from the program. GAO also interviewed officials from the program office, Navy test organizations, and the contractor.

GAO is not making any recommendations in this report.

View [GAO-20-356](#). For more information, contact Timothy J. DiNapoli at (202) 512-4841 or dinapolit@gao.gov.

April 2020

PRESIDENTIAL HELICOPTER

Program is Meeting Cost Goals but Some Technical and Schedule Risks Remain

What GAO Found



Source: United States Navy (NAVAIR 2019-566). | GAO-20-356

The Navy estimates the cost to develop, procure, and maintain the VH-92A[®] over its 40-year operational life to be just over \$20.5 billion, or about 10 percent less than the Navy's 2014 baseline estimate (see table).

VH-92A Helicopter Program Cost Estimate Has Decreased

| Then-year dollars in millions | April 2014 Baseline | April 2019 Estimate | Change |
|---|---------------------|---------------------|--------------|
| Development | \$2,805.7 | \$2,648.8 | -5.6% |
| Procurement | 2,379.0 | 2,246.5 | -5.6 |
| Total Program Acquisition Costs | 5,184.7 | 4,895.3 | -5.6 |
| Operations and support | 17,674.3 | 15,641.9 | -11.5 |
| Total Estimated Life Cycle Costs | \$22,859.0 | \$20,537.2 | -10.2 |

Source: GAO presentation of Navy data | GAO-20-356

Navy and contractor officials worked to remain within the program's April 2014 cost baseline estimate, in part, by keeping program requirements stable, limiting design changes, and taking advantage of cost saving initiatives. The Navy also plans to use Navy personnel and facilities to perform depot-level maintenance for the VH-92A fleet, rather than sending the helicopters back to the contractor as is currently done.

The program has made progress addressing technical risks and performance challenges GAO discussed in prior reports; however, an April 2019 operational assessment confirmed several other risks that could affect the helicopter's ability to meet its reliability and availability requirements. For example, Navy officials stated that the assessment confirmed known limitations with the mission communications system. Upgraded software intended to address those limitations is to be evaluated during the initial operational test and evaluation scheduled to be conducted between June and September 2020. The results of that testing could impact the Navy's planned January 2021 decision to begin using the helicopters as part of the presidential helicopter fleet.

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Abbreviations

| | |
|-------|---|
| CAPE | Cost Assessment and Program Evaluation |
| DOD | Department of Defense |
| EMD | Engineering and Manufacturing Development |
| IOC | Initial Operational Capability |
| IOT&E | Initial Operational Test and Evaluation |
| MCS | Mission Communications System |
| RD&A | Research, Development and Acquisition |
| SDTA | System Demonstration Test Article |

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April 16, 2020

Congressional Committees

The Navy's VH-92A[®] program is to replace the aging presidential helicopter fleet, which has been in service for several decades.¹ The VH-92A program is expected to provide new helicopters that ensure the safe, reliable, and timely transportation of the President and other parties as directed by the White House Military Office. The Navy plans to acquire a fleet of 23 VH-92A helicopters to replace the Marine Corps' existing fleet of VH-3D and VH-60N helicopters. The Navy's acquisition strategy is to integrate mature technologies and an executive interior into an existing in-production commercial helicopter while minimizing modifications to avoid the technical challenges and cost overruns that led to the termination of its predecessor program in 2009. Delivery of production VH-92A helicopters is scheduled to begin in April 2021 with final delivery in January 2023.

The National Defense Authorization Act of 2014 includes a provision for GAO to report annually on the acquisition of the VH-92A presidential helicopter until the Navy awards a contract for full-rate production.² We have previously issued five reports in response to this provision.³ This report examines (1) the extent to which the program is meeting cost goals and (2) performance and schedule challenges that the program has experienced in developmental testing and plans for addressing them.

To evaluate the extent to which the program is meeting cost goals, we identified and assessed changes in the program's development, production, and operation and support cost estimates by comparing the program's April 2014 approved program baseline estimates with estimates developed in April 2019 that supported the program's production decision. These data were contained in defense acquisition executive summary reports, selected acquisition reports, and briefings provided by the program office and Sikorsky Aircraft Corporation, a

¹ VH-92A[®] is a registered trademark of the United States Navy.

² Pub. L. No. 113-66, § 252 (2013).

³ For a list of prior reports, see related GAO products at the end of this report.

Lockheed Martin company (the prime contractor for the program).⁴ We also examined and analyzed key acquisition documents, including contractor monthly status reports and Defense Contract Management Agency reports. We interviewed officials from the Office of Cost Assessment and Program Evaluation (CAPE), the Navy's Presidential Helicopter Program Office to discuss the methodology used to develop the independent cost estimate, and component cost position, respectively. We also compared CAPE's independent cost estimate to the Navy's component cost estimate to identify differences in the estimates.

To assess the challenges GAO previously identified and those recently experienced in developmental testing and steps taken to address those challenges, we examined May 2019 operational assessment reports on the VH-92A Program prepared by the Navy's Commander, Operational Test and Evaluation Force and the Director, Operational Testing and Evaluation; and contractor and Defense Contract Management Agency status reports. We also interviewed representatives from the Navy's Presidential Helicopter Program office in Patuxent River, Maryland; Sikorsky's program office in Stratford, Connecticut; the Defense Contract Management Agency; the Navy's Commander, Operational Test and Evaluation Force; and the offices of the Director, Operational Testing and Evaluation, and Director, Developmental Test and Evaluation. To assess whether the program is achieving schedule goals, we compared program milestones established at the start of the program in April 2014 to the program's October 2019 Integrated Master Schedule.

We conducted this performance audit from May 2019 to April 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit and obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The Marine Corps' Marine Helicopter Squadron One (HMX-1) currently uses a fleet of 23 helicopters to support the President in the national capital region, the continental United States and overseas.⁵ In April 2002, the Navy began developing a replacement helicopter later identified as the VH-71. Schedule delays, performance issues, and a doubling of

⁴ In November 2015, Lockheed Martin acquired Sikorsky Aircraft Corporation.

⁵ The 23 helicopters consist of 19 operational, 2 test, and 2 training helicopters.

estimated acquisition costs from \$6.5 billion to \$13 billion prompted the Navy to terminate the VH-71 program in 2009. Our prior work found that the VH-71 program's failure to follow acquisition best practices was a critical factor in the program's poor performance that led to its ultimate termination.⁶ In the case of the VH-71, the Navy had a faulty business case, did not perform appropriate systems engineering analysis to gain knowledge at the right times, and failed to make necessary trade-offs between resources and requirements even after years of development. Because of these failures, the program was unable to achieve a stable design and experienced significant cost growth and schedule delays.

Although the prior replacement program was terminated, the need for a replacement helicopter remained. As a result, the Navy initiated a follow-on replacement program in 2010. In April 2012, the Secretary of Defense approved the Navy's plan based on the modification of an in-production helicopter to meet Navy requirements. The VH-92A is expected to provide improved performance, survivability, and communications capabilities, while offering increased passenger capacity when compared to legacy helicopters.

In May 2014, the Navy competitively awarded a contract to Sikorsky to develop the VH-92A, which included options for production. The \$2.7 billion contract includes a fixed-price incentive (firm target) Engineering and Manufacturing Development (EMD) phase and a firm-fixed price production phase with options for three lots for 17 helicopters, spares and support equipment. Under the EMD phase, Sikorsky has delivered two development test helicopters which were used in an operational assessment that was completed in April 2019.⁷ Additionally, Sikorsky has delivered three of four System Demonstration Test Article (SDTA) production representative helicopters that are being used in developmental testing and that will also be used to evaluate the VH-92A's operational effectiveness and suitability during the program's Initial Operational Test and Evaluation (IOT&E). The fourth SDTA helicopter is to be delivered in May 2020 and will also be used to conduct IOT&E.

⁶ GAO, *Presidential Helicopter Acquisition: Effort Delayed as DOD Adopts New Approach to Balance, Requirements, Costs, and Schedule*, [GAO-12-381R](#) (Washington, D.C.: February 27, 2012).

⁷ These development helicopters were used to conduct the operational assessment that informed the decision on whether to enter into low-rate initial production.

In June 2019, the Assistant Secretary of the Navy, Research, Development and Acquisition (RD&A) approved the program to begin low-rate initial production of the helicopters and authorized the program to exercise the contract options for the first two low-rate production lots. Shortly thereafter, the Navy exercised the Lot I option for 6 helicopters, initial spares, and support equipment for \$542 million. Those helicopters, initial spares and support equipment are all to be delivered in calendar year 2021. In February 2020, the Navy exercised the Lot II option for \$471 million for 6 additional helicopters and associated support equipment. All of these helicopters and support equipment will be delivered in calendar year 2022.

The Navy had planned for two years of low-rate initial production of 6 helicopters each year followed by one year of full-rate production for the remaining 5 helicopters. The Navy's acquisition strategy in support of the production decision included a change in that plan with the re-designation of full-rate production as a third lot of low-rate production. A key reason for the change is that the planned full-rate production run of 5 helicopters was too small to achieve the potential cost benefits of full-rate production, which typically involves purchasing a sufficient number of helicopters to decrease unit cost. This revised strategy would also enable the Navy to award the third production lot seven months earlier than the originally planned May 2021. Before obligating the funding available for the second lot, the program office had to brief the Assistant Secretary of the Navy (RD&A) on various elements of the VH-92A's performance. The program office is required to obtain approval from the Assistant Secretary of the Navy (RD&A) for the procurement of the last lot (Lot III) with a decision brief that includes, among other things, the status of IOT&E.

Building a VH-92A helicopter involves work at three facilities. To begin the production process, Sikorsky takes an S-92A helicopter from its commercial production line in Coatesville, Pennsylvania and flies it to a dedicated VH-92A modification facility in Stratford, Connecticut. Once there, Sikorsky removes some components, such as circuit breaker panels, engines, and main and tail rotor blades and replaces them with VH-92A components. Additionally, Sikorsky modifies the helicopter to accommodate VH-92A specific subsystems, including racks and wiring for a Navy-developed mission communications system (MCS). Sikorsky then flies the helicopter to a dedicated facility in Owego, New York where it integrates the MCS, installs the executive cabin interior, paints the helicopter, and conducts final testing before delivering the helicopter to the government. See figure 1 for a depiction of modifications of the commercial S-92A helicopter to the VH-92A presidential helicopter.

Figure 1: Modification of the S-92A Commercial Helicopter to the VH-92A



Source: First two photos provided by ©2016 Sikorsky Aircraft Corporation, a Lockheed Martin Company; third photo provided U.S. Navy (NAVAIR 2019-566); GAO analysis of Navy program office information. | GAO-20-356

Prior GAO Work on VH-92A Acquisition

We have reported annually on the Navy’s effort to replace the current fleet of presidential helicopters since 2011. Our reports highlighted, in part, the extent to which the Navy used the lessons learned from the failed VH-71 program—the need to balance requirements, costs, and schedule and the importance of establishing a knowledge-based program that is aligned with acquisition best practices—in its new effort. For example, our 2011 report found that while the replacement program was early in its development cycle, the Navy’s initial efforts appeared to reflect the intent to pursue a best practices aligned knowledge-based acquisition.⁸

Following the program’s entry into the EMD phase of acquisition in April 2014, we found that the Navy’s reliance on mature technologies, selection of an existing helicopter for use in the program, and award of a fixed-price

⁸ GAO, *Defense Acquisitions: Application of Lessons Learned and Best Practices in the Presidential Helicopter Program*, [GAO-11-380R](#) (Washington, D.C.: March 25, 2011).

incentive type contract reduced risk.⁹ As to be expected with a major system development effort, however, we found the program still faced a number of technical challenges. In four reports issued from 2016 to 2019, we found that the Navy continued making progress in developing the VH-92A helicopter while managing design, integration and technical challenges. Some key technical risk and challenges that we previously identified are summarized in table 1. We discuss the current status of the Navy’s efforts to address these challenges later in the report.

Table 1: VH-92A Technical Risks and Challenges Identified in GAO Reports from 2016 to 2019

| Technical risk area ^a | Description of risk and challenges |
|--|--|
| VH-92A helicopter start procedures | Sikorsky’s S-92A propulsion system had yet to meet requirements. |
| Electromagnetic environment effects (E3)/electromagnetic pulse (EMP) | As the program progressed, modifications were required to ensure the VH-92A helicopter can operate in a degraded electromagnetic environment. An electromagnetic pulse is a burst of high power electromagnetic radiation that is designed to intentionally disrupt or destroy electronic equipment. |
| Landing Zone Suitability | The program had yet to meet a key system capability requirement to land the helicopter without adversely affecting landing zones, such as the White House South Lawn. The heat from the engine and/or the auxiliary power unit may damage to the landing zone under certain conditions. |
| Mission Communications System (MCS) | The VH-92A’s MCS is a Navy-developed, executive communications suite that utilizes existing off-the-shelf components to provide passengers and crew with access to on-board and off-board communications services. MCS was unable to connect to required secure networks, due to recent changes in security protocols. |
| Cybersecurity ^b | DOD released a revised cybersecurity policy and risk management framework after the VH-92A program’s Test and Evaluation Master Plan was approved. The program has an approved cybersecurity strategy and the Test and Evaluation Master Plan has been updated to reflect DOD’s latest cybersecurity policy. |

Source: GAO presentation of Navy data. | GAO-20-356

^aThese technical issues, with the exception of cybersecurity, are directly linked to key performance parameters and/or key system attributes.

^bDepartment of Defense Instruction (DODI) 8500.01, Cybersecurity (Mar. 14, 2014, Incorporating Change 1, Effective Oct. 7, 2019) and DODI Risk Management Framework (RMF) for DOD Information Technology (IT) (Mar. 12, 2014, Incorporating Change 2, July 28, 2017).

⁹ GAO, *Presidential Helicopter Acquisition: Program Established Knowledge-Based Business Case and Entered System Development with Plans for Managing Challenges*, [GAO-15-392R](#) (Washington, D.C.: April 14, 2015).

Estimated Program Costs Have Decreased by 10 Percent

In April 2019, the Navy estimated that the VH-92A would cost about \$4.9 billion to develop and produce and about \$15.6 billion to operate and support the helicopters through fiscal year 2062.¹⁰ Overall, the Navy's \$20.5 billion estimate reflects a 10-percent reduction from the program's 2014 baseline estimate (see table 2).¹¹

Table 2: Baseline and April 2019 VH-92A Helicopter Program Cost Estimates and Quantities

Then-year dollars in millions

| Program Acquisition Costs | April 2014 Baseline Estimate | April 2019 Navy Estimate | Change | Percent Change |
|---|------------------------------|--------------------------|----------------|----------------|
| Development | \$2,805.7 | \$2,648.8 | \$156.9 | -5.6% |
| Procurement | 2,379.0 | 2,246.5 | 132.5 | -5.6 |
| Total Program Acquisition Cost | 5,184.7 | 4,895.3 | 289.4 | -5.6 |
| Operations and support | 17,674.3 | 15,641.9 | 2,032.4 | -11.5 |
| Total Estimated Life Cycle Costs | 22,859.0 | 20,537.2 | 2,321.8 | -10.2 |
| Quantity | 23 | 23 | 0 | 0 |

Source: GAO presentation of Navy data | GAO-20-356

The Navy and contractor officials worked together to remain within the program's April 2014 cost baseline, in part, by keeping requirements stable, limiting the design changes, and taking advantage of cost saving initiatives. For example, the Navy has not added any key performance requirements to the fixed-price incentive contract since it was awarded in 2014. The Navy has, however, implemented a small number of design changes to add an additional cockpit display and increase the height of the upper portion of the forward aircraft door. Previously, we found that cost saving initiatives included leveraging the Federal Aviation Administration's airworthiness certification process, optimizing work processes, and reducing the movement of helicopters between contractor sites.¹²

¹⁰ We also reviewed program cost estimates as of August 2019 and found them to be consistent with but slightly higher than those used to support the production decision. Navy officials requested that we use the April 2019 cost estimate prepared for that decision, as they consider that to be the latest available official cost estimate.

¹¹ CAPE also produced an independent cost assessment for the VH-92A program in April 2019. CAPE's independent cost assessment was generally consistent with the Navy's estimate for the production decision.

¹² In July 2018, the Federal Aviation Administration certified the VH-92A development model helicopter and supporting documentation to allow delivery to the government.

In addition, the Navy attributes the reduction in cost to support the VH-92A fleet to using a planned maintenance interval concept as the basis for its April 2019 cost estimate. Program officials explained that the April 2014 baseline estimate was based on the approach used to maintain the current fleet of VH-3D and VH-60N presidential helicopters. For these helicopters, the contractor carries out depot-level maintenance by disassembling, inspecting, and reassembling them at its maintenance depot. However, for the VH-92A, the Navy intends to perform depot-level maintenance itself through scheduled inspections at its own presidential helicopter support facility, which was designed to support this approach. As a result, the Navy expects to be able to support the VH-92A fleet in a more cost-effective manner while ensuring the availability of the helicopter to perform its mission.

Upcoming Initial Operational Test and Evaluation Will Demonstrate Extent to Which Technical Issues Have Been Addressed as Program Approaches End of Development

The program has made progress addressing technical risks and performance challenges we discussed in prior reports and deficiencies confirmed during the April 2019 operational assessment. According to program officials, solutions for these performance shortfalls, except for the landing zone suitability issue, have been developed and successfully tested during integrated testing and will be evaluated during the 3-month IOT&E test scheduled to begin in June 2020.¹³ The program is pursuing options to achieve landing zone suitability that include possible changes in operational procedures, helicopter design, and lawn surface treatments. If design modifications are required, they will not be implemented until after IOT&E. As a result, the Navy may not be able to fully demonstrate that the VH-92A helicopter meets all its key requirements until after the test program is complete. Further, IOT&E results may also identify additional issues that may require additional design or software changes. Depending on the severity of the issues, the Navy may need additional time to test and incorporate changes into the helicopter, including those helicopters currently in production.

VH-92A Program Is Addressing Performance Shortfalls Previously Identified in Testing

The program office has mitigated or reduced risk on some technical issues we discussed in prior reports. For example, according to program documents, the program has mitigated the risk in the following areas: helicopter start procedures, electromagnetic environment effects/ electromagnetic pulse and cybersecurity. The Navy assessed these capabilities during earlier developmental test and during the operational

¹³ The program's integrated test period, following the operational assessment and production decision, includes integrated ground and flight tests, mission scenarios, and analysis of available documentation and supportability products.

assessment, which concluded in April 2019; subsequently, the Navy approved the program to enter into production. However, the operational assessment confirmed other known performance shortfalls—specifically those associated with the MCS—that, if not corrected, could prevent the program from meeting certain operational requirements.

The MCS replaces the communications suite currently used by the in-service fleet and provides VH-92A passengers, pilots, and crew with simultaneous short- and long-range secure and non-secure voice and data communications capabilities. As such, its performance is critical for the VH-92A to meet its mission. To conduct its operational assessment, the Navy used two development test helicopters and a developmental version of MCS software with known performance and capability limitations. The operational assessment confirmed these MCS-related performance limitations, including dropped communication connections. Navy officials noted that these and other MCS-related performance shortfalls could, if not addressed, reduce the helicopter's availability to perform its transport mission and lower overall reliability, among other operational requirements.

Overall, the operational assessment confirmed 24 MCS-related performance limitations. According to program officials, they have incorporated or identified fixes to 22 of the 24 issues, which they are now testing on SDTA helicopters. In turn, these fixes are expected to be incorporated into MCS software that will be tested during IOT&E. According to program officials, the remaining two MCS issues are related to bandwidth and an unreliable off-aircraft network configuration affecting on-aircraft system performance. According to those officials, the VH-92A is already equipped with a wide-band line-of-sight system that provides high bandwidth, though with coverage limitations. The program is conducting market research on how to provide the helicopter with increased bandwidth with increased coverage.

The remaining two issues were assessed earlier as having a serious (but not critical) impact to mission accomplishment. In addition to the MCS deficiencies, the helicopter experienced problems with other components during the April 2019 operational assessment. For example, the mission and maintenance data computer repeatedly sent out false warning alarms/notifications, which affected the reliability and required the aircrew to spend extra time troubleshooting or switch to a backup helicopter. A software update to help address this issue is planned for the computer prior to IOT&E.

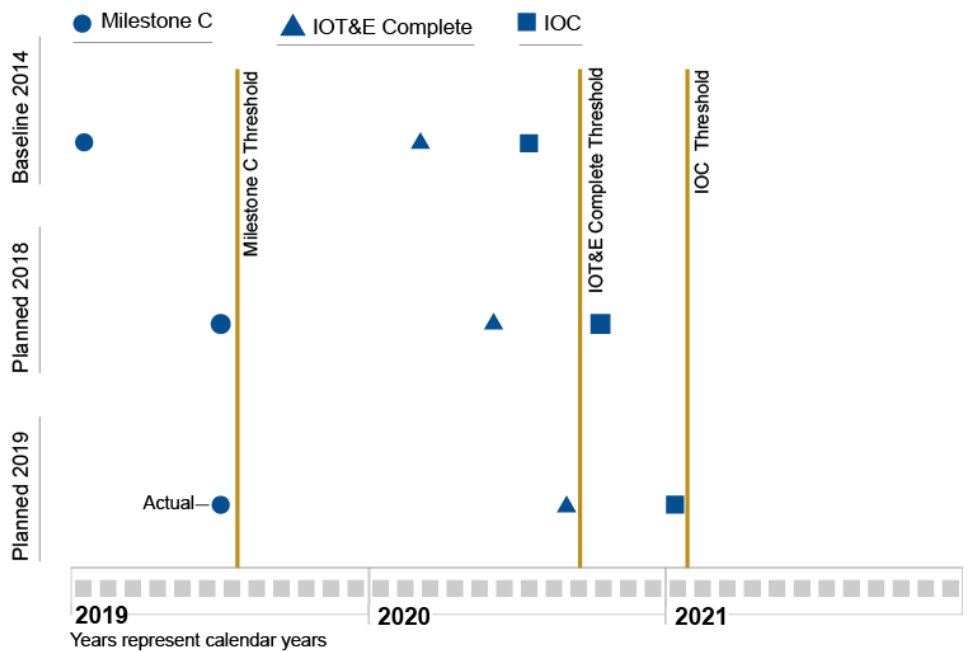
The program is also still working to demonstrate the ability of the helicopter to meet a key system capability requirement to land the helicopter without damaging landing zones (including the White House South Lawn). For landing zone suitability, the program's objective has been to assess the downwash and exhaust effects on the landing zone. In a September 2018 training event, the Navy found that VH-92A's exhaust damaged a landing zone. Program officials stated that the training event did not represent a typical operational scenario since the lawn was exposed to the helicopter's exhaust for a longer period than it would be under normal operating conditions. The program is studying solutions to minimize risk of landing zone damage including possible changes in operational procedures, helicopter design, and lawn surface treatments. For example, the contractor developed a prototype design change to the helicopter's auxiliary power unit to deflect exhaust. Flight testing of the prototype design change was conducted in March 2020 with analysis of the results expected in April 2020. Navy officials stated the contractor is also conducting testing to determine if changes in helicopter and/or engine operating procedures can mitigate the risk of landing zone damage. According to both program officials and contractor representatives, a decision on potential solutions will be made prior to IOT&E. If design modifications are required, they will not be implemented until after IOT&E.

Program Schedule Has Slipped Further but Remains within the Original Approved Schedule Thresholds

Initial operational testing of the VH-92A, which will be used to evaluate operational effectiveness and suitability of the helicopter, training system, support equipment, upgraded MCS software and other changes implemented to address previously identified issues, is now scheduled to be conducted between June and September 2020. As such, IOT&E will be conducted about 3 months later than we reported in 2019, but is expected to be completed by the threshold (latest acceptable) date in the Navy's April 2014 baseline. Program officials attributed the 3-month delay to the need to develop MCS hardware and software changes that are currently being tested. Should IOT&E demonstrate that efforts to address the MCS performance issues or other previously identified issues are insufficient—or if the testing identifies new issues that result in the program being unable to meet its operational requirements—then the program may need to identify, test and incorporate changes into the VH-92A's design and into the helicopters already in production, further delaying the program and increasing associated costs. As previously noted, the first delivery of the helicopters ordered under the first production option is scheduled to begin in April 2021.

As a result of the revised IOT&E test schedule, the program office has also delayed the initial operational capability (IOC) milestone, which clears the helicopter to enter service, by 3 months to January 2021. This new date represents a total delay of 6 months from the original date but still remains within the IOC threshold date established in April 2014.¹⁴ Figure 2 compares the program’s 2019 schedule with the 2014 baseline schedule and the 2018 schedule we reported on last year.¹⁵

Figure 2: Changes in VH-92A Key Program Milestones from April 2014 Baseline to October 2019



- Milestone C** The Milestone C review approves a system to enter production and deployment.
- IOT&E** The Initial Operational Test and Evaluation is conducted on production, or production representative articles, to determine whether systems are operationally effective and suitable for intended use by representative users.
- IOC** Initial Operational Capability is a point in time where a system can meet the operational capabilities for user’s stated need. For the VH-92A, IOC is defined as 4 aircraft fielded with required support equipment, training support, technical manuals, trained personnel, and logistics support in place to execute mission requirements in the National Capital Region.

Source: GAO analysis of Department of Defense data. | GAO-20-356

¹⁴ The 4 SDTA helicopters built in development are production representative for the program’s IOT&E and then are to be subsequently fielded to meet the VH-92A’s IOC requirement.

¹⁵ [GAO-19-329](#).

Program officials acknowledged that if there is a delay in the program that results in the program breaching a schedule threshold established in its acquisition baseline, they would need to submit a program deviation report to the Assistant Secretary of the Navy (RD&A). In turn, the program may need to keep certain staff in place longer than originally planned, potentially increasing program costs. However, program officials told us that the program can cover any additional costs with existing funding. Further, Navy officials stated that should IOC be delayed, the Navy will continue to use its existing fleet of presidential helicopters as the VH-92A transitions into the HMX-1 fleet. Navy officials indicated that the transition process will be gradual, and that the existing fleet is sufficiently funded until HMX-1 completes the transition.

Agency Comments

We are not making any recommendations in this report. We provided DOD with a draft of this report. DOD provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense and the Secretary of the Navy. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-4841 or DiNapoliT@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix I.



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Appendix I: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

In addition to the contact above, Bruce H. Thomas, Assistant Director; Marvin E. Bonner; Bonita J.P. Oden; Alexander Webb; Peter Anderson; Robin Wilson; and Marie Ahearn made key contributions to this report.

Related GAO Products

Presidential Helicopter: Program Continues to Make Development Progress While Addressing Challenges. [GAO-19-329](#). Washington, D.C.: April 11, 2019.*

Presidential Helicopter: VH-92A Program Is Stable and Making Progress While Facing Challenges. [GAO-18-359](#). Washington, D.C.: April 30, 2018.*

Defense Acquisitions: Assessments of Selected Weapon Programs. [GAO-17-333SP](#). Washington, D.C.: March 30, 2017.*

Presidential Helicopter: Program Progressing Largely as Planned. [GAO-16-395](#). Washington, D.C.: April 14, 2016.*

Presidential Helicopter Acquisition: Program Established Knowledge-Based Business Case and Entered System Development with Plans for Managing Challenges. [GAO-15-392R](#). Washington, D.C.: April 14, 2015.*

Presidential Helicopter Acquisition: Update on Program's Progress toward Development Start. [GAO-14-358R](#). Washington, D.C.: April 10, 2014.

Department of Defense's Waiver of Competitive Prototyping Requirement for the VXX Presidential Helicopter Replacement Program. [GAO-13-826R](#). Washington, D.C.: September 6, 2013.

Presidential Helicopter Acquisition: Program Makes Progress in Balancing Requirements, Costs, and Schedule. [GAO-13-257](#). Washington, D.C.: April 9, 2013.

Presidential Helicopter Acquisition: Effort Delayed as DOD Adopts New Approach to Balance Requirements, Costs, and Schedule. [GAO-12-381R](#). Washington, D.C.: February 27, 2012.

Defense Acquisitions: Application of Lessons Learned and Best Practices in the Presidential Helicopter Program. [GAO-11-380R](#). Washington, D.C.: March 25, 2011.

*GAO issued these reports on the VH-92A program in response to a provision in National Authorization Defense Act of 2014.

GAO's Mission

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