United States Government Accountability Office

Report to Congressional Committees

January 2021

DHS ANNUAL ASSESSMENT

Most Acquisition Programs Are Meeting Goals but Data Provided to Congress Lacks Context Needed For Effective Oversight

GAO-21-175

GAO@100

Highlights

Highlights of GAO-21-175, a report to congressional committees

January 2021

DHS ANNUAL ASSESSMENT

Most Acquisition Programs Are Meeting Goals but Data Provided to Congress Lacks Context Needed For Effective Oversight

Why GAO Did This Study

DHS plans to spend more than $7 billion on its portfolio of major acquisition programs—with life-cycle costs over $300 million— in fiscal year 2021 to help execute its many critical missions. The Explanatory Statement accompanying the DHS Appropriations Act, 2015, included a provision for GAO to review DHS's major acquisitions on an ongoing basis.

This report, GAO's sixth review, assesses the extent to which (1) DHS's major acquisition programs are meeting baseline goals, (2) DHS's guidance for developing acquisition documentation is consistent with DHS acquisition policy, and (3) DHS is reporting relevant information to Congress on its portfolio of major acquisition programs.

GAO assessed 24 acquisition programs, including DHS's largest programs that were in the process of obtaining new capabilities as of April 2018, and programs GAO or DHS identified as at risk of poor outcomes. GAO assessed cost and schedule progress against baselines; assessed DHS's congressional reporting requirements; and interviewed DHS officials and congressional appropriations committee staff.

What GAO Recommends

GAO is making one recommendation for DHS to align acquisition guidance with policy, and one matter for Congress to consider determining what additional information it needs to perform oversight. DHS concurred with our recommendation.

View GAO-21-175. For more information, contact Marie A. Mak at (202) 512-4841 or makm@gao.gov.

What GAO Found

As of September 2020, 19 of the 24 Department of Homeland Security (DHS) programs GAO assessed that had DHS approved acquisition program baselines were meeting their currently established goals. However, of the 24 programs, ten had been in breach of their cost or schedule goals, or both, at some point during fiscal year 2020. A few programs experienced breaches related to external factors, such as the COVID-19 pandemic, while others breached their baseline goals because of acquisition management issues. Five of these programs rebaselined to increase costs or delay schedules, but the remaining five were still in breach status as of September 2020 (see table). Further, GAO found that some of the 19 programs that were meeting their currently established goals—including the U.S. Coast Guard's Offshore Patrol Cutter program—are at risk of future cost growth or schedule slips.

DHS Major Acquisition Programs In Breach of Approved Cost or Schedule Goals (or Both) As of September 2020.

Program (estimated life-cycle cost)	Breach Type
National Cybersecurity Protection System ($5,908 million)	Schedule
Homeland Advanced Recognition Technology ($3,923 million)	Cost and Schedule
Grants Management Modernization ($289 million)	Cost and Schedule
National Bio Agro-Defense Facility ($1,298 million)	Schedule
Medium Range Surveillance Aircraft ($15,187 million)	Schedule

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

Note: The life-cycle cost information is the current acquisition program baseline cost goal as of September 2020. Programs may revise cost goals, if necessary, when the new baseline is approved.

GAO found that supplemental guidance for the development of acquisition documents generally aligned with requirements in DHS's acquisition management policy. However, guidance for developing acquisition documentation in DHS's Systems Engineering Life Cycle Instruction and accompanying Guidebook does not reflect current requirements in DHS's acquisition management policy. DHS officials stated that the information related to development of acquisition documents—including the systems engineering life cycle tailoring plan—should be consistent across all of DHS's policies, instructions, and guidebooks. Inconsistent agency-wide guidance can lead to a lack of clarity on when programs should submit their program documentation.

The Joint Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2019, directed DHS to provide quarterly briefings on summary ratings for all major acquisition programs. While DHS is meeting this direction with summary ratings, the ratings do not include contextual information, such as programs' cost, schedule, or performance risks. This type of information would help Congress understand how the ratings relate to potential program outcomes. Determining what additional risk information is needed for DHS's major acquisition programs along with the reporting timeframes and the appropriate mechanism to provide the information, would help ensure that decision makers have needed context.

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Abbreviations

ADE	acquisition decision event
APB	acquisition program baseline
DHS	Department of Homeland Security
JRC	Joint Requirements Council
LCCE	life-cycle cost estimate
O&S	operations and support
ORD	operational requirements document
PC&I	procurement, construction and investment
PARM	Office of Program Accountability and Risk Management

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January 19, 2021

Congressional Committees

Each year, the Department of Homeland Security (DHS) invests billions of dollars in a diverse portfolio of major acquisition programs to help execute its many critical missions. DHS and its components are acquiring systems to help secure the border, increase marine safety, screen travelers, enhance cybersecurity, improve disaster response, and execute a wide variety of other operations. In fiscal year 2021 alone, DHS plans to spend over $7 billion on these acquisition programs, and ultimately, the department plans to invest more than $220 billion over the life cycle of these programs. Most of DHS's major acquisition programs cost at least $300 million and take multiple years to acquire.[1]

To help manage these programs, DHS established an acquisition management policy that we found to be generally sound in that it reflects key program management practices we identified in prior work.[2] However, we found shortfalls in executing the policy and highlighted DHS acquisition management issues in our high-risk updates since 2005.[3] Over the past decade, we also found that department leadership has dedicated additional resources and implemented new policies designed to improve acquisition oversight. However, our work has also identified shortcomings in the department's ability to manage its portfolio of major acquisitions and we have made numerous recommendations over the past decade to help address these challenges.[4] For example, in April 2017, we recommended that DHS update its acquisition policy to require that major acquisition programs' technical requirements are well defined and key technical reviews are conducted prior to approving programs to

[1]DHS defines major acquisition programs as those with life-cycle cost estimates of $300 million or more. In some cases, DHS may define a program with a life-cycle cost estimate less than $300 million a major acquisition if it has significant strategic or policy implications for homeland security, among other things.

[2]GAO, *Homeland Security: DHS Requires More Disciplined Investment Management to Help Meet Mission Needs,* GAO-12-833 (Washington, D.C.: Sept. 18, 2012).

[3]GAO, *High-Risk Series: An Update,* GAO-05-207 (Washington, D.C.: Jan. 1, 2005). For our most recent report, see *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, GAO-19-157SP (Washington, D.C.: Mar. 6, 2019).

[4]For examples of past GAO work, see a list of related GAO products at the end of this report.

initiate product development and establishing acquisition program baselines (APB), in accordance with acquisition leading practices.[5] In response to our recommendation, DHS revised its acquisition policy and adjusted the acquisition life cycle. Specifically, the updated instruction requires programs to conduct key technical reviews before establishing the program's initial DHS approved APB.

Nonetheless, DHS has not fully addressed some of our other recommendations. For example, in May 2018, we recommended that DHS should require the Office of Program Accountability and Risk Management (PARM) to assess the results of major acquisition programs' post implementation reviews and identify opportunities to improve performance across the acquisition portfolio.[6] Although DHS concurred with our recommendation and has taken steps to address it, the department is still in the process of developing tools to share lessons learned. Additionally, in December 2019, we found that major acquisition programs' schedule goals did not trace to the integrated master schedules in accordance with DHS guidance.[7] We recommended that DHS create an oversight process to confirm that programs' schedule goals are developed and updated to ensure traceability between APB schedule goals and integrated master schedules, in accordance with GAO's Schedule Assessment Guide.[8] DHS has taken some initial steps to begin reviewing program schedules; however, as of September 2020 it has yet to create an oversight process.

The Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2015 contained a provision for GAO to conduct ongoing reviews of major DHS acquisition programs, as directed in the

[5]GAO, *Homeland Security Acquisitions: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress,* GAO-17-346SP (Washington, D.C.: Apr. 6, 2017).

[6]GAO, *Homeland Security Acquisitions: Leveraging Programs' Results Could Further DHS's Progress to Improve Portfolio Management,* GAO-18-339SP (Washington, D.C.: May 17, 2018).

[7]GAO, *Homeland Security Acquisitions: Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals,* GAO-20-170SP (Washington, D.C.: Dec. 19, 2019).

[8]GAO, *Schedule Assessment Guide: Best Practices for Project Schedules*, GAO-16-89G (Washington, D.C.: Dec. 22, 2015).

Senate report.[9] This is our sixth such review. This report assesses the extent to which (1) DHS's major acquisition programs are meeting their baseline goals, (2) DHS's guidance for developing acquisition documentation is consistent with DHS acquisition policy, and (3) DHS is reporting relevant information to Congress on its portfolio of major acquisition programs.

To answer these objectives, we reviewed 30 of DHS's 43 major acquisition programs identified in the department's January 2020 Master Acquisition Oversight List. The programs we selected for review included 14 of DHS's Level 1 acquisition programs—those with life-cycle cost estimates (LCCE) of $1 billion or more—that were in the process of obtaining new capabilities at the initiation of our audit, which DHS policy defines as the obtain phase of the acquisition life-cycle. We also selected 16 other major acquisition programs that we or DHS management identified as at risk of not meeting their schedules, cost estimates, or capability requirements. Three of these 16 programs were Level 2 acquisitions with LCCEs between $300 million and less than $1 billion in the obtain phase. The other 13 programs were Level 1 or Level 2 programs that had not yet entered or were beyond the obtain phase.

To determine the extent to which the 30 programs we selected are meeting their schedule and cost goals, we analyzed available acquisition documentation, such as APBs, which contain information on programs' schedules and cost estimates. Since the November 2008 update to DHS's overarching acquisition management directive, these documents have required DHS-level approval; therefore, we used November 2008 as the starting point for our analysis. We found that 24 of the 30 programs had one or more department-approved APBs between November 2008 and September 30, 2020. The remaining six programs do not yet have department-approved APBs, and as a result, we excluded them from our portfolio analysis. However, appendix I includes an assessment of these six programs. We used the APBs and other program documents to construct a data collection instrument for each program and to determine whether the programs experienced schedule slips or cost growth, or whether they were meeting their established baselines as of September 30, 2020. See table 1.

[9]Explanatory Statement submitted by Mr. Rogers of Kentucky, Chairman of the House Committee on Appropriations, regarding H.R. 240, Department of Homeland Security Appropriations Act, 2015, (161 Cong. Rec., H-276 (Jan. 13, 2015).

Table 1: DHS Major Acquisition Programs Selected for Review

Component	Program	Acquisition Level
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	1
	National Cybersecurity Protection System	1
	Next Generation Networks – Priority Services Phase 1	2
	Next Generation Networks – Priority Services Phase 2	2
DHS Management Directorate	Homeland Advanced Recognition Technology	1
Federal Emergency Management Agency	Grants Management Modernization	2
Science and Technology Directorate	National Bio and Agro-Defense Facility	1
Transportation Security Administration	Checkpoint Property Screening System	1
	Credential Authentication Technology	2
	Electronic Baggage Screening Program	1
U.S. Citizenship and Immigration Services	Transformation	1
U.S. Coast Guard	270' Medium Endurance Cutter Service Life Extension Program	1
	Fast Response Cutter	1
	H-65 Conversion/Sustainment Projects	1
	Long Range Surveillance Aircraft (HC-130H/J)	1
	Medium Range Recovery Helicopter	1
	Medium Range Surveillance Aircraft (HC-144 and C-27J)	1
	National Security Cutter	1
	Offshore Patrol Cutter	1
	Polar Security Cutter	1
U.S. Customs and Border Protection	Automated Commercial Environment	1
	Biometric Entry-Exit	1
	Border Wall System Program	1
	Cross Border Tunnel Threat	1
	Integrated Fixed Towers	2
	Medium Lift Helicopter	1
	Multi-Role Enforcement Aircraft	1
	Non-Intrusive Inspection Systems	1
	Non-Intrusive Inspection Integration	1
	Remote Video Surveillance Systems	1

Legend: shaded rows = the program has not yet established an acquisition program baseline approved by DHS leadership.

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

Appendix I presents individual assessments of and information about each of the 30 programs we reviewed. These assessments include key information such as the status of programs' schedules, costs, and testing.

Our objective for the 2-page assessments is to provide decision makers a means to quickly gauge the programs' progress and the extent to which they face any cost, schedule, performance, or program risks.

To determine the extent to which DHS's guidance for developing acquisition documentation is consistent with DHS's acquisition policy, we reviewed DHS's acquisition management instruction and compared it to supplemental guidance provided by DHS subject matter experts. We focused our review on nine selected acquisition documents that require headquarters-level approvals for capital assets. Examples include APBs, LCCEs, and operational requirements documents (ORD). We first determined when DHS's acquisition management instruction initially required each acquisition document or required an update for each document. We then compared our findings to the requirements identified in supplemental guidance for each document to determine if the supplemental guidance aligned with the acquisition management instruction. To verify our findings and obtain information on DHS's plans to address related issues, we subsequently interviewed DHS headquarters officials including officials from PARM, the Office of the Chief Financial Officer, and the Science and Technology Division's Test and Evaluation Directorate.

To determine the extent to which DHS is reporting relevant information to Congress on its portfolio of major acquisition programs, we reviewed the briefing request contained in the Joint Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2019.[10] We then reviewed documentation DHS provided to the appropriations committees, such as briefing slides. We also reviewed the underlying documentation that was used to develop them, such as DHS's Acquisition Program Health Assessment reports, which DHS leadership uses to assess the health of major acquisition programs. Additionally, we met with PARM officials who developed the briefings provided to appropriations committees. We also interviewed congressional staff from the Homeland Security Subcommittees for the Senate and House Committees on Appropriations to discuss the information they receive from DHS, to

[10]The DHS Chief Acquisition Officer has been directed to provide quarterly briefings on summary ratings for all Level 1 and Level 2 acquisition programs to the appropriations committees. H. R. Rep. No. 116-9, at 473 (Feb. 13, 2019) (Conf. Rep.), accompanying Consolidated Appropriations Act, 2019 (H.J. Res. 31), Pub. L. No. 116-6, 133 Stat. 13; H.R. Rep. No. 115-948, at 12 (Sept. 12, 2018).

determine if the information being provided was sufficient to meet the needs of the committees in their oversight roles.

Appendix II provides detailed information on our scope and methodology.

We conducted this performance audit from January 2020 to January 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to 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

To help manage its multi-billion dollar acquisition investments, DHS has established policies and processes for acquisition management, requirements development, test and evaluation, and resource allocation. The department uses these policies and processes to deliver systems that are intended to close critical capability gaps, helping enable DHS to execute its missions and achieve its goals.

Acquisition Management Policy

DHS's policies and processes for managing its major acquisition programs are primarily set forth in its Acquisition Management Directive 102-01 and Acquisition Management Instruction 102-01-001. DHS issued the initial version of this directive in November 2008 in an effort to establish an acquisition management system that effectively provides required capability to operators in support of the department's missions. DHS issued multiple updates to its acquisition management directive and instruction, in part to be responsive to our recommendations. DHS issued the current version of the directive in February 2019 and the current version of the instruction in August 2020.

DHS also issued a separate Systems Engineering Life Cycle policy consisting of an instruction (102-01-103) and its implementing guidebook (102-01-103-01) in November 2015 and April 2016, respectively, that outlines the technical framework underlying DHS's acquisition management system. However, as of September 2020, DHS officials stated they were in the process of updating both the instruction and guidebook to reflect the changes to the acquisition management directive and instruction. These officials anticipate issuing the updated System Engineering Life Cycle Instruction and Guidebook by December 2020. DHS's Under Secretary for Management is currently designated as the department's Chief Acquisition Officer and, as such, is responsible for managing the implementation of the department's acquisition policies.

The Under Secretary for Management is the acquisition decision authority for the department's largest acquisition programs, those with LCCEs of $1 billion or greater. Component Acquisition Executives—typically the most senior acquisition management officials within each of DHS's components—may be delegated acquisition decision authority for programs with cost estimates between $300 million and less than $1 billion. Table 2 identifies how DHS categorized the 30 major acquisition programs we reviewed in this report.[11]

Table 2: DHS Acquisition Levels for Selected Major Acquisition Programs

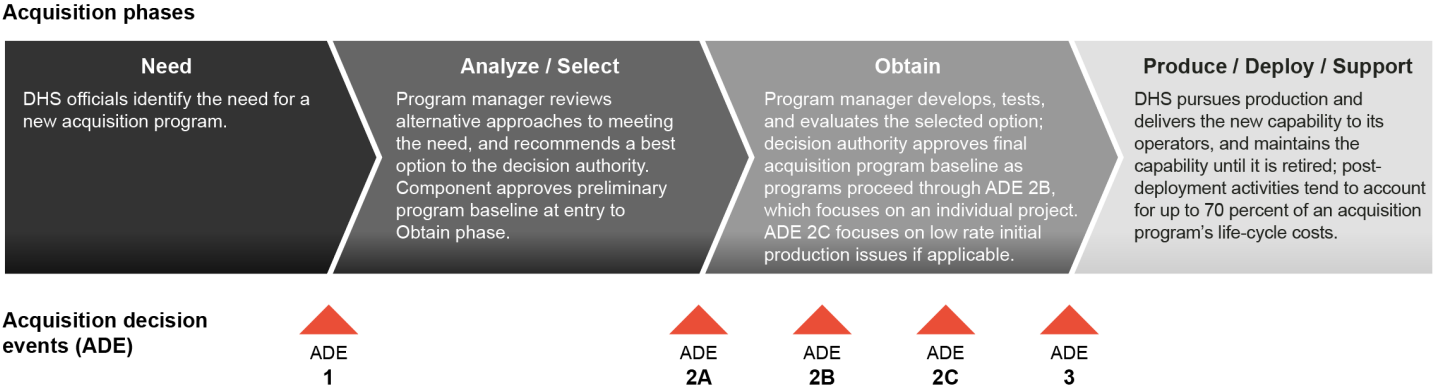
Level	Life-cycle cost estimates	Acquisition decision authority	Number of programs reviewed in this report
1	Greater than or equal to $1 billion	Under Secretary for Management/Chief Acquisition Officer	25
2	$300 million or more, but less than $1 billion	Under Secretary for Management/Chief Acquisition Officer, or the Component Acquisition Executive	5

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

DHS acquisition management policy establishes that a major acquisition program's decision authority shall review the program at a series of predetermined acquisition decision events (ADE) to assess whether the major program is ready to proceed through the acquisition lifecycle phases. Depending on the program, these events can occur within months of each other or be spread over several years. The 2019 revision to the DHS acquisition management policy modified entrance criteria for ADEs. For example, the revised policy requires acquisition decision authority approval of APBs by ADE 2B. Under the prior version of the policy, acquisition decision authority approval of the APB occurred at ADE 2A. Figure 1 reflects the current acquisition life cycle in DHS acquisition management policy.

[11]See appendix II for the programs within each level.

Figure 1: DHS Acquisition Life Cycle for Major Acquisition Programs



Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

Note: Programs may develop capabilities through individual projects, segments, or increments, which are approved at ADE 2B. Programs without individual projects, segments, or increments may conduct a combined ADE 2A/2B since ADE 2B is the first milestone at which programs are required to submit certain acquisition documents.

An important aspect of an ADE is the decision authority's review and approval of key acquisition documents. See table 3 for a description of the type of key acquisition documents identified in the August 2020 acquisition instruction that required department-level approval for capital assets, as well as the ADE at which DHS's acquisition policy requires it to be completed.

Table 3: Select DHS Headquarters-Approved Documents Required at Acquisition Decision Events (ADE) For Capital Assets

Document Name	ADE 1	ADE 2A	ADE 2B	ADE 2C	ADE 3
Acquisition Program Baseline (APB)	—	—	X[a]	X[a]	X[a]
• Establishes a program's critical baseline cost, schedule, and performance parameters. • Expresses the parameters in measurable, quantitative terms, which must be met in order to accomplish the program's goals.					
Analysis of Alternatives (AOA) Study Plan	—	X	—	—	—
• Sets assumptions, scope, and constraints for the AOA, which is an analytical comparison of selected solution alternatives to fulfill a capability gap or need.					
Capability Development Plan (CDP)	X	—	—	—	—
• Serves as the agreement between the component head, program manager, and the acquisition decision authority on the activities, cost, and schedule for the analysis and selection of potential solutions to fill a mission need.					

Document Name	ADE 1	ADE 2A	ADE 2B	ADE 2C	ADE 3
Integrated Logistics Support Plan (ILSP)	—	—	X	X[a]	X[a]
• Defines the strategy for ensuring the supportability and sustainment of a future capability. • Provides critical insight into the approach, schedule, and funding requirements for integrating supportability requirements into the systems engineering process.					
Life-Cycle Cost Estimate (LCCE)	—	X	X[a]	X[a]	X[a]
• Provides an exhaustive and structured accounting of all resources and associated cost elements required to develop, produce, deploy, and sustain a particular program.					
Mission Need Statement (MNS)	X	—	—	—	—
• Synopsizes at a high-level the specific capabilities required to accomplish DHS's mission objectives, along with deficiencies and gaps in these capabilities.					
Operational Requirements Document (ORD)	—	X	—	—	—
• Captures the business or operational user requirements and identifies which of these requirements are key performance parameters. • Describes the mission, objectives, and capabilities in operationally relevant terms.					
System Engineering Life Cycle Tailoring Plan (SELC-TP)	—	X	—	—	—
• Tailors the phases, products, and reviews in the System Engineering Life Cycle to meet the specific needs of each program and project.					
Technology Assessment	—	X	—	—	—
• Provides relevant information on the technical maturity, manufacturing capability, and technical risk of a planned technology.					
Test and Evaluation Master Plan	—	X	—	X[a]	—
• Documents the overarching test and evaluation approach for the acquisition program. • Describes the developmental and operational test and evaluation needed to determine a system's technical performance, operational effectiveness, suitability, and cyber resiliency.					

Legend:

— No requirement

X requirement

Source: GAO analysis of Department of Homeland Security (DHS) information. | GAO-21-175

Note: In October 2020, DHS updated its test and evaluation directive and the instruction for implementing the directive. We will assess the new versions of these documents in future assessments.

[a]Document must be approved and updated, as necessary, to reflect the current status of the program.

In a 2019 revision to DHS's acquisition policy, DHS modified the way in which APBs for major acquisition programs are developed and approved. Specifically, the policy now states that a preliminary APB—approved by component acquisition executives—is required at ADE 2A. The preliminary APB is updated, as necessary, and submitted for approval by the acquisition decision authority at ADE 2B. By contrast, the prior version of the acquisition policy required the acquisition decision authority to approve an initial APB at ADE 2A. Obtaining acquisition decision authority approval of the APB later in the acquisition life cycle allows programs to better define technical requirements prior to approval.

DHS acquisition management policy establishes that the APB is the agreement between program, component, and department-level officials that establishes how systems being acquired will perform, when they will be delivered, and what they will cost. Specifically, the APB establishes a program's schedule, costs, and key performance parameters. DHS requirements policy describes key performance parameters as a program's most important and non-negotiable requirements that a system must meet to fulfill its fundamental purpose. For example, a key performance parameter for an aircraft may be airspeed and a key performance parameter for a surveillance system may be detection range.

The APB establishes objective (target) and threshold (maximum acceptable for cost, latest acceptable for schedule, and minimum acceptable for performance) baselines. According to DHS policy, if a program fails to meet any schedule, cost, or performance threshold approved in the APB, it is considered to be in breach. Programs in breach are required to notify their acquisition decision authority and develop a remediation plan that outlines a time frame for the program to return to its APB parameters, rebaseline—that is, establish new schedule, cost, or performance goals—or have a DHS-led program review that results in recommendations for a revised baseline.

In addition to the acquisition decision authority, other bodies and senior officials support DHS's acquisition management function:

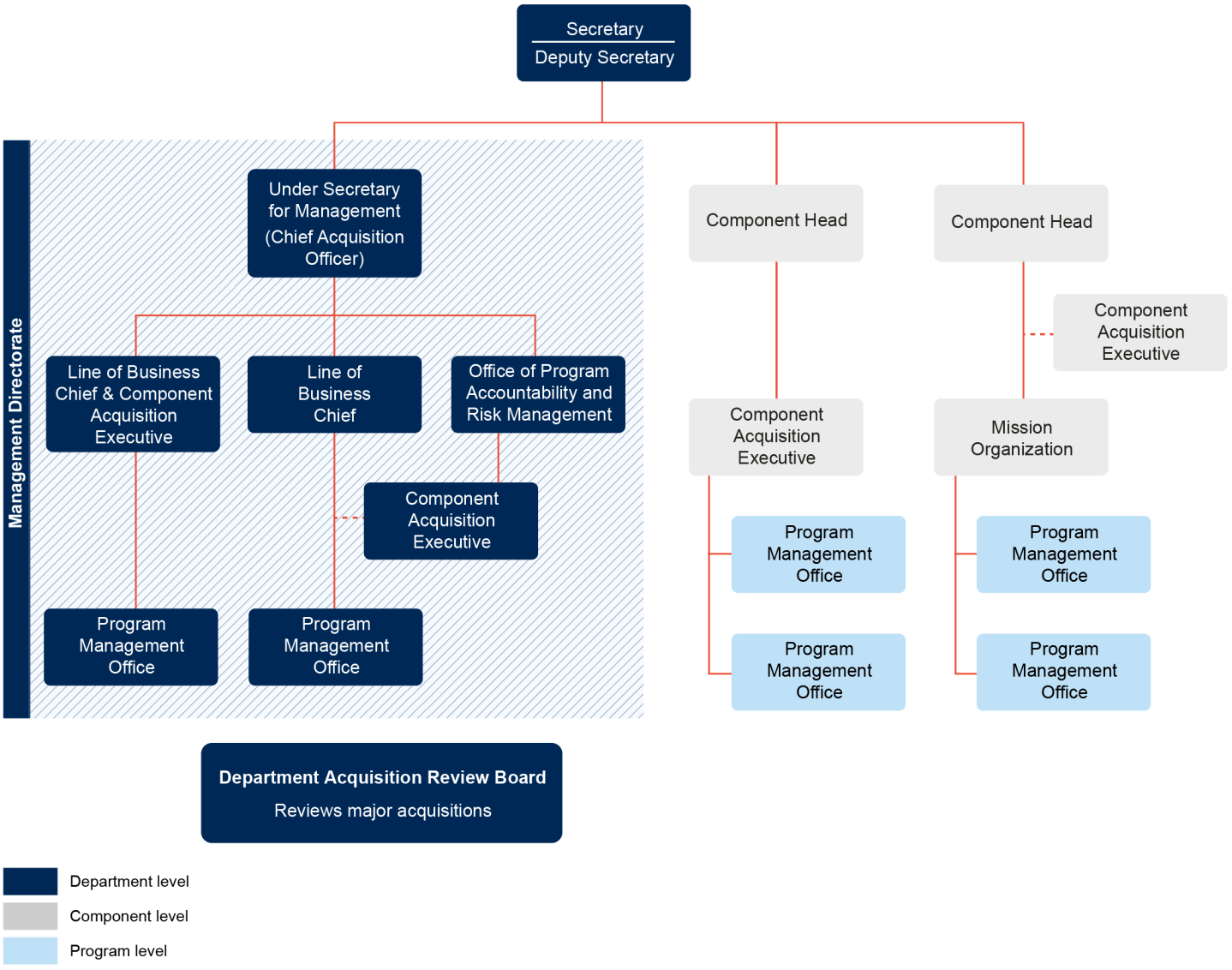
- The Acquisition Review Board reviews major acquisition programs for proper management, oversight, accountability, and alignment with the department's strategic functions at ADEs and other meetings as needed. The board is chaired by the acquisition decision authority or a designee and consists of members and representatives who manage DHS's mission objectives, resources, and contracts.

- The Line of Business Chiefs include the DHS Chief Financial Officer, the Chief Information Officer, the Chief Procurement Officer, the Chief Human Capital Officer, the Chief Security Officer, and the Chief Readiness Support Officer, among others. The Line of Business Chiefs have responsibility for executing acquisition portfolios and are responsible and accountable for adhering to the department's acquisition policies and procedures to ensure the sound management, review, support, and approval. The Line of Business Chiefs also provide oversight of acquisition programs within their respective organizations and are members of the Acquisition Review Board.
- The Office of Program Accountability and Risk Management (PARM) is responsible for DHS's overall acquisition governance process, supports the Acquisition Review Board, and reports directly to the Under Secretary for Management. PARM develops and updates acquisition management policies and procedures, reviews major programs, provides guidance for workforce planning activities, and provides support to program managers.
- Components, such as U.S. Customs and Border Protection, the Transportation Security Administration, and the U.S. Coast Guard sponsor specific acquisition programs.[12] The head of each component is responsible for oversight of major acquisition programs once the programs complete delivery of all planned capabilities to end users.
- Component Acquisition Executives within the components are responsible for overseeing the execution of their respective portfolios.
- Program management offices, also within the components, are responsible for planning and executing DHS's individual programs. They are expected to do so within the cost, schedule, and performance parameters established in their APBs. If they cannot do so, programs are considered to be in breach and must take specific steps, as noted above.

[12]DHS's components consist of operational components—those that have responsibility for directly achieving one or more of the department's missions or activities—and support components—those that generally provide assistance or guidance to other DHS components or external organizations. For example, the Management Directorate is a support component that generally provides assistance and guidance to other DHS components and external organizations and includes functions like budget, finance, information technology, facilities, human capital, and acquisitions. However, the Management Directorate also manages acquisition programs. Typically these programs are those that involve multiple components, such as programs related to relocating the DHS headquarters and updates to financial systems for multiple components.

Figure 2 depicts the relationship between acquisition managers at the department, component, and program level.

Figure 2: Department of Homeland Security's Acquisition Management Structure



Source: GAO analysis of Department of Homeland Security information. | GAO-21-175

Requirements Development Process

In 2016, we found that DHS had not effectively implemented or adhered to its review process for major acquisitions and recommended that DHS reinstate the Joint Requirements Council (JRC) to review and approve acquisition requirements and assess potential duplication of effort across the department.[13] DHS established a JRC to develop and lead a component-driven joint requirements process for the department. In March 2016, DHS revised its policy instruction to reflect the addition of the JRC as an acquisition oversight body. Among other responsibilities, the JRC is to provide requirements-related advice and validate key acquisition documentation to prioritize requirements and inform DHS investment decisions among its components. The JRC chair is a member of the Acquisition Review Board and advises the board on capability gaps, needs, and requirements at key milestones in the acquisition life cycle. In March 2019, we reported that the JRC could better fulfill its mission by identifying overlapping or common requirements, and by making recommendations to senior leadership to inform budget decisions and help ensure that DHS uses its finite investment resources wisely.[14] We will continue to monitor the JRC's efforts through GAO's high risk work.

Test and Evaluation Policy

In May 2009, DHS established policies that describe processes for testing the capabilities delivered by the department's major acquisition programs.[15] The primary purpose of test and evaluation is to provide timely, accurate information to managers, decision makers, and other stakeholders to reduce programmatic, financial, schedule, and performance risks. We provide an overview of programs' test activities in the individual program assessments presented in appendix I, as appropriate.

DHS testing policy assigns specific responsibilities to particular individuals and entities throughout the department:

[13]DHS re-established the JRC in June 2014. For more information, see GAO, *Homeland Security Acquisitions: Joint Requirements Council's Initial Approach Is Generally Sound and It Is Developing a Process to Inform Investment Priorities*, GAO-17-171 (Washington, D.C.: Oct. 24, 2016).

[14]GAO-19-157SP.

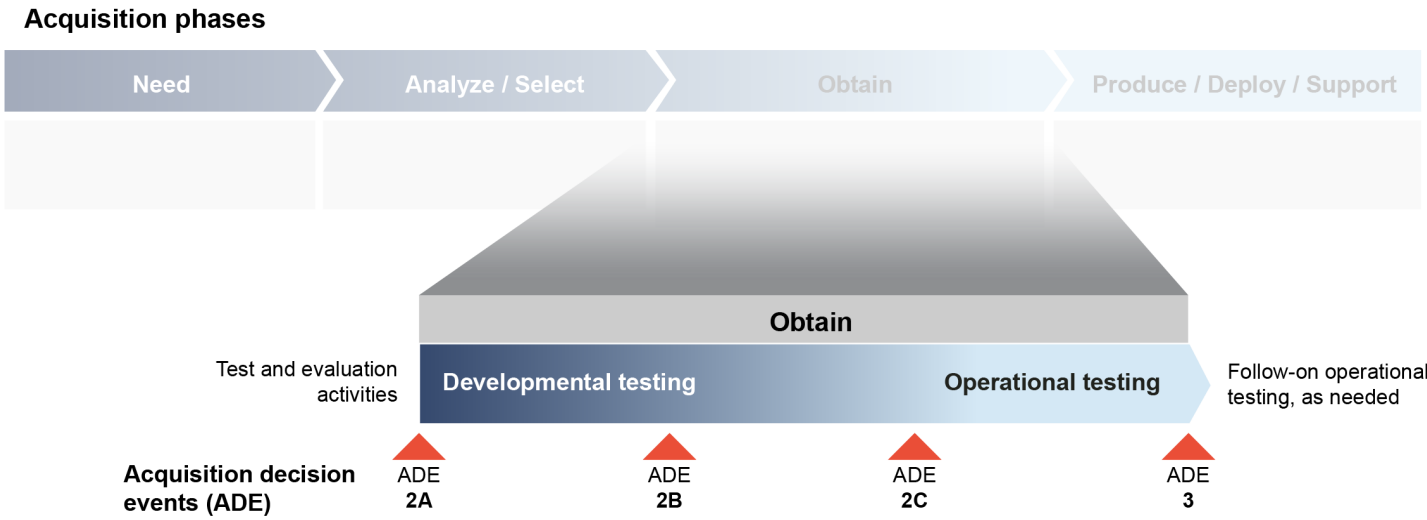
[15]DHS issued multiple updates to its Test and Evaluation Directive 026-06 and instruction for implementing this directive, and issued the current versions of the directive and instruction on October 1, 2020. We will incorporate changes in these policies in future assessments of DHS major acquisition programs.

- Program managers have overall responsibility for planning and executing their programs' testing strategies, including scheduling and funding test activities and delivering systems for testing.
- Operational test agents are responsible for planning, conducting, and reporting on operational test and evaluation to identify whether a system can meet its key performance parameters and provide an evaluation of the operational effectiveness, suitability, and cybersecurity of a system in a realistic environment. Operational effectiveness refers to the overall ability of a system to provide a desired capability when used by representative personnel. Operational suitability refers to the degree to which a system can be placed into field use and sustained satisfactorily. Operational cyber resiliency refers to the degree to which a system is able to accomplish its mission in a cyber-contested environment. The operational test agents may be organic to the component, another government agency, or a contractor, but must be independent of the program manager, end user, and developer.
- The Director, Office of Test and Evaluation (DOT&E) is responsible for approving major acquisition programs' operational agent and test and evaluation master plans, among other things. A program's test and evaluation master plan must describe the developmental and operational testing needed to determine technical performance and operational effectiveness, suitability, and cyber resiliency.[16] As appropriate, the Director is also responsible for participating in operational tests, reviewing operational test agents' reports, and assessing the reports. Prior to a program's ADE 2C, ADE 3, and other ADEs, as appropriate, the Director provides the program's acquisition decision authority a letter of assessment that includes an appraisal of the program's operational test, a concurrence or non-concurrence with the operational test agent's evaluation, and any further independent analysis.

As an acquisition program proceeds through its life cycle, the testing emphasis moves gradually from developmental testing to operational testing. In addition to operational testing, programs complete an assessment of cyber resiliency to inform ADE 3. See figure 3.

[16]DHS's updated the acquisition management instruction (DHS Instruction 102-01-001) in May 2019 and again in August 2020 and updated its test and evaluation instruction in October 2020. These instructions require the Test and Evaluation Master Plan at ADE 2A. Previously, it was required at ADE 2B.

Figure 3: Test Activities Established by DHS Policy within the Obtain Phase



Source: GAO analysis of Department of Homeland Security (DHS) documents. | GAO-21-175

Over Three-Quarters of Selected Programs are Meeting Goals, but 10 Were in Breach at Some Point During Fiscal Year 2020 and Several Face Future Risks

Of the 24 programs we assessed with department-approved APBs, 19 are currently meeting their most recent cost and schedule baseline goals as of September 2020. However, 10 of the 24 programs were in breach of their cost, schedule, or both goals at some point during fiscal year 2020. A few of the programs experienced breaches related to external factors, such as Coronavirus Disease 2019 (COVID-19), while others breached their baseline goals because of acquisition management issues.

Moreover, some programs continue to face risks of breaching cost and schedule goals in the future. Of the 24 programs we assessed, 17 have conducted testing of their key performance parameters and are meeting their most recent department-approved performance goals. However, DHS leadership identified at least three programs that are at risk of not meeting end user needs, but have taken steps to improve outcomes. As a result of COVID-19, we found instances where programs faced challenges or anticipate challenges in the future, but several officials reported that DHS leadership is helping programs identify mitigation strategies on a case by case basis.

Nineteen of 24 Programs Are Meeting Established Cost and Schedule Goals as of September 2020

We found that 19 of the 24 programs we reviewed with department-approved APBs were meeting their current baseline goals as of September 2020. The remaining five programs were not meeting their baseline goals and were in the process of revising their baselines or planned to revise their baselines. See Table 4 for the status of each of the 24 programs we assessed as of September 2020.

Table 4: Department of Homeland Security Program Status as of September 2020

Meeting baseline goals	Not meeting baseline goals
Cybersecurity and Infrastructure Security Agency • Continuous Diagnostics and Mitigation[a] • Next Generation Networks - Priority Services* **Transportation Security Administration** • Credential Authentication Technology • Electronic Baggage Screening Program **U.S. Citizenship and Immigration Services** • Transformation **U.S. Coast Guard** • 270’ Medium Endurance Cutter • Fast Response Cutter • H-65 Conversion/Sustainment Program • Long Range Surveillance Aircraft • National Security Cutter[a] • Offshore Patrol Cutter • Polar Security Cutter **U.S. Customs and Border Protection** • Automated Commercial Environment • Biometric Entry-Exit Program • Border Wall System Program • Integrated Fixed Towers • Medium Lift Helicopter • Multi-Role Enforcement Aircraft[a] • Non-Intrusive Inspection Systems[a]	**Cybersecurity and Infrastructure Security Agency** • National Cybersecurity Protection System **DHS Management Directorate** • Homeland Advanced Recognition Technology **Federal Emergency Management Agency** • Grants Management Modernization **Science and Technology Directorate** • National Bio and Agro-Defense Facility **U.S. Coast Guard** • Medium Range Surveillance Aircraft

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

[a]Indicates program is meeting DHS approved baseline goals, but costs or schedule may exceed baseline (1) because the program plans to revise its baseline after receiving additional funding to procure more capability than reflected in the current baselines, or (2) due to adjustments officials said they made in response to revised component guidance.

Ten Programs Were in Breach of Cost or Schedule Goals at Some Point during Fiscal Year 2020 and Some Programs Are at Risk of Breaching Goals in the Future

Of the 24 programs we reviewed, 10 were in breach of their cost goals, schedule goals, or both at some point during fiscal year 2020. We found that programs' breaches were a result of various factors. Of these 10 programs, five revised their cost and schedule goals during fiscal year 2020 following a breach and the remaining five programs were still in breach status as of September 2020. See table 5 for some details on the breaches of these 10 programs. For additional details, see appendix I.

Table 5: DHS Major Acquisition Programs in Breach Status At Some Point During Fiscal Year 2020

Component	Program	Breach Type	Reason for Breach	Effect of Breach
Programs that rebaselined				
Transportation Security Administration	Electronic Baggage Screening Program	Cost	Change in procurement strategy	Total life-cycle cost increase of $928 million
U.S. Coast Guard	Offshore Patrol Cutter	Schedule	Effects of Hurricane Michael	Acquisition decision event 2C slipped 3 months, initial operational testing slipped by 21 months, initial operational capability slipped 18 months
U.S. Customs and Border Protection	Biometric Entry-Exit	Cost and Schedule	Testing delays, and initial cost estimate was immature	Acquisition decision event 3 date slipped by 3 months and total life-cycle cost increased by $524 million
U.S. Customs and Border Protection	Border Wall System Program (Fiscal Year 2018)	Schedule	Delays in land acquisitions	Initial operational capability date for the Rio Grande Valley sector slipped by 15 months; initial operational capability date for San Diego sector slipped by 3 months
U.S. Customs and Border Protection	Integrated Fixed Towers	Schedule	Delays in land access negotiations	Full operational capability date slipped 6 months
Programs still in breach status				
Cybersecurity and Infrastructure Security Agency	National Cybersecurity Protection System	Schedule	Delays in updating requirements documents	Not yet known

Component	Program	Breach Type	Reason for Breach	Effect of Breach
DHS Management Directorate	Homeland Advanced Recognition Technology	Cost and Schedule	Contractor's approach was not feasible and a lack of understanding of complexity of requirements	Not yet known
Federal Emergency Management Agency	Grants Management Modernization	Cost and Schedule	Underestimation of scope and complexity of program	Not yet known
Science and Technology Directorate	National Bio and Agro-Defense Facility	Schedule	Effects of Coronavirus Disease 2019	Not yet known
U.S. Coast Guard	Medium Range Surveillance Aircraft	Schedule	Contracting delays	Not yet known

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

In addition, some of the programs on track as of September 2020—including some that rebaselined in fiscal year 2020—are facing risks that might lead to cost growth or schedule slips in the future. For example,

- U.S. Customs and Border Protection's Border Wall System Program is at risk for additional schedule slips as a result of continuing issues acquiring land necessary to construct the border wall. Specifically, program officials told us that as a result of the outbreak of COVID-19 and social distancing requirements, there have been challenges meeting with land owners, In addition, some courts have been closed, which limits the ability to search county records and hold hearings related to land possession.
- U.S. Customs and Border Protection's Integrated Fixed Tower program is at risk of additional schedule slips, which officials attribute in part to time needed to allow for the preservation of archaeological sites that were uncovered while building access roads to tower sites.
- U.S. Coast Guard's Polar Security Cutter will likely experience a schedule slip because planned delivery of the lead ship is 2 months after the program's APB threshold date. Further, during a briefing to Coast Guard leadership in April 2020, program officials reported that the program's aggressive schedule continues to be one of its most significant risks. In September 2020, DHS officials told us that the program plans to rebaseline in late calendar year 2020 or early 2021 to update its cost and schedule goals based on contractor information not available when the baseline was established.
- U.S Coast Guard's Offshore Patrol Cutter is at risk of additional schedule slips and cost growth. As we reported in October 2020, the Offshore Patrol Cutter program continues to move forward in the acquisition process with an immature design as well as cost and

schedule risks.[17] After the shipbuilder requested relief from certain requirements under contract following widespread disruptions from Hurricane Michael in October 2018, the Coast Guard divided the program into two stages and a revised baseline in March 2020. Under this revised plan, the current shipbuilder will build up to four cutters in the first stage, while the acquisition of the remaining 21 cutters will be awarded under one or more new contracts in fiscal year 2022 in the second stage. The program's revised baseline, however, does not include a schedule or a refined cost estimate that fully account for these changes.

Programs Are Generally Achieving Performance Goals and Although Some Are at Risk of Not Meeting End User Needs, Actions Have Been Identified

Seventeen of the 24 programs we reviewed conducted testing of deployed capabilities and were generally achieving their performance goals as of September 2020. Of the key performance parameters assessed for these 17 programs, we found instances where not all of a program's key performance parameters were assessed during testing because capability associated with the performance parameter has not yet been developed. For example, the Cybersecurity and Infrastructure Security Agency's Next Generation Networks – Priority Services program deploys capability incrementally. The program has not yet achieved two of its key performance parameters because the capability for the program's second increment has not yet been deployed.

However, in assessments of programs' operational assessments and test events, DOT&E identified several programs that have significant operational risks. For example, DHS leadership identified at least three programs as at risk of not meeting end user needs following operational assessments or test events. Two of these programs met their key performance parameters during operational test events. In each of these cases, actions have been identified, but not yet completed, to address the concerns. Specifically:

- Custom and Border Protection's Biometric Entry-Exit, Air-Exit capability: In December 2019, DOT&E assessed the program's operational test results and determined the program met its four key performance parameters. However, DOT&E concluded that the capability deployed did not satisfy all user operational requirements. Specifically, in the assessment, DOT&E reported the Air-Exit capability did not clearly demonstrate enhancements prior to operational test and evaluation, and the testing did not identify any

[17]GAO, *Coast Guard Acquisitions: Opportunities Exist to Reduce Risk for the Offshore Patrol Cutter Program*, GAO-21-9 (Washington, D.C.: Oct. 28, 2020).

clear or measurable operational benefits. DOT&E's assessment was considered as part of the program's December 2019 ADE 3, which approved full scale production and deployment. However, the program was directed to update its concept of operations and operational requirements document to more clearly describe the program's expected benefits, among other things. As of September 2020, these documents were still in the process of being updated.

- Cybersecurity and Infrastructure Security Agency's National Cybersecurity Protection System Block 2.2: In January 2018, DOT&E assessed the program's operational assessment and determined that current user operations did not align with the program's key acquisition documentation. Further, DOT&E concluded that the program's key performance parameters were not operationally meaningful to track progress to full operational capability. DOT&E's assessment of Block 2.2 was considered during the segment's ADE 2C. DHS leadership acknowledged the segment was as risk of not meeting the end user's needs, but granted approval for ADE 2C in February 2018. DOT&E recommended that the program revise its key performance parameters and DHS leadership directed the program to update its concept of operations and operational requirements document following the decision. As a result of delays experienced while revising these documents, the program declared a schedule breach in January 2020. In August 2020, program officials told us they now plan to restructure the program after fully assessing the requirements of end users, but they were unsure when acquisition documents would be revised to reflect program changes.

Custom and Border Protection's Automated Commercial Environment: In November 2018, DOT&E assessed the program's operational test results and determined that the program's Entry Summary, Accounts, and Revenue capability—which provides import and entry specialists with electronic data—decreases CBP's operational efficiency. The report noted that CBP officials estimated a 30 to 40 percent increase in staff would be required to reach the previous throughput levels prior to deploying this capability. DHS leadership granted the program approval for ADE 3—approving full scale production and deployment—in November 2018 and directed the program to continue developing the Entry Summary, Accounts, and Revenue capability to improve operational effectiveness. DHS leadership also directed follow-on operational test and evaluation to ensure that the identified issues were corrected. Follow-on testing was completed in July 2020 and the operational test agent determined that all critical operational issues, including those related to Entry Summary, Accounts and Revenue capability, had been resolved. However, CBP officials stated that cyber resiliency testing was delayed

due to the COVID-19 pandemic but they anticipate the results will be finalized by December 2020. DOT&E also identified several other programs with operational risks due to the status of implementing cyber resiliency requirements. In October 2019, we reported that cyberattacks have the potential to prevent systems from working when needed which could lead to an inability for end users to complete missions or even loss of life. At that time, we found that program compliance with DHS's cybersecurity testing requirements had been slow.[18] During this review, we found that DHS leadership and programs continue to take steps to address cyber resiliency. However, we found that DHS leadership at times directs programs to complete cyber resiliency testing through action items in acquisition decision memorandums. For example, in September 2019, the U.S. Customs and Border Protection's Multi-Role Enforcement Aircraft program achieved ADE 3 for its air interdiction aircraft. In the letter of assessment from DOT&E that informed the ADE 3, DOT&E acknowledged the program had not completed cyber resilience testing. In response, DHS leadership directed the program to develop a plan to assess cyber resiliency. Officials from DHS's Test and Evaluation Division stated that they are taking steps to help ensure that programs' plans to assess cyber resiliency are incorporated earlier in the acquisition lifecycle so testing can be completed as part of operational test and evaluation and inform ADE 3. For example, DOT&E stated that as programs update test and evaluation master plans, a plan to assess cyber resiliency must be included in order to obtain approval.

Some Programs Have Experienced or Anticipate Future Challenges Due to COVID-19

Due to the outbreak of COVID-19, which was characterized by the World Health Organization as a pandemic in March 2020, some of the 24 programs we reviewed have faced challenges or anticipate challenges in the future. As a result, in October 2020, DHS's Undersecretary for Management authorized Component Acquisition Executives, in coordination with PARM, the authority to provide up to a 6-month extension of schedule baseline goals for Level 1 and select Level 2 major acquisition programs that experience delays related to COVID-19. Component Acquisition Executives must also notify DHS's Cost Analysis Division of any cost baseline adjustments that major acquisition programs experiencing schedule delays need as a result of COVID-19. Several officials reported that DHS and component leadership are helping programs identify mitigation strategies on a case by case basis because

[18]GAO, *Homeland Security Acquisitions: Opportunities Exist to Further Improve DHS's Oversight of Test and Evaluation Activities*, GAO-20-20 (Washington, D.C.: Oct. 24, 2019).

the COVID-19 situation is still evolving and presents unique challenges to each program.

In some instances, programs identified risks of not receiving funding necessary to deploy capabilities as planned. For example, U.S. Customs and Border Protection's Biometric Entry-Exit and U.S. Citizenship and Immigration Services' Transformation programs reported shortfalls in fees the government collects from immigration services that are used to fund these programs. According to officials, collection of fees for these services has been significantly reduced, in part because of the COVID-19 pandemic. Officials from U.S. Customs and Border Protection stated that they have prior year funding available to mitigate funding shortfalls in fiscal year 2020, but they are coordinating with component and DHS officials to address anticipated funding gaps in fiscal year 2021. Similarly, Transformation program officials said they are coordinating with U.S Citizenship and Immigration Services officials and also are assessing staffing needs based on workload and fees collected.

In other instances, programs reported that social distancing requirements—the practice of maintaining physical distance from others and avoiding large gatherings to reduce the rate of infectious diseases—as well as travel restrictions have resulted in schedule delays and limited the ability of some contractors to perform work as expected. For example:

- U.S. Coast Guard officials said the H-65 Conversion/Sustainment program experienced a 5-week pause of the aircraft's production line as a result of social distancing requirements that limited the contractor's ability to complete work as planned. Coast Guard officials said that the schedule delays have not had an effect on the program's full operational capability date.
- Cybersecurity and Infrastructure Security Agency's Next Generation Networks - Priority Services program reported delays in testing due to social distancing requirements, which limited the number of officials allowed within lab spaces. Program officials stated these delays were mitigated such that the program's APB milestone will not be affected.
- The Transportation Security Administration's Electronic Baggage Screening Program reported delays in testing due to social distancing requirements. According to program officials, the Transportation Security Administration's Systems Integration Facility prioritized testing of certain technologies, but the delays have not had a significant effect on the program's schedule.

- The Science and Technology Directorate's National Bio and Agro-Defense Facility officials reported that the program experienced schedule delays as a result of stay-at-home orders and travel restrictions related to COVID-19. Program officials reported that these restrictions limited the participation of key stakeholders in the testing and commissioning process of the facility. As a result, the program needs to execute contract modifications to extend the time frames for work. For additional information on the effects of COVID-19 on individual programs, see appendix I.

Supplemental Guidance Is Generally Consistent with Acquisition Policy, but Systems Engineering Guidance Does Not Align

We found that supplemental guidance for the development of acquisition documents generally aligned with requirements outlined in DHS's August 2020 acquisition management policy. For example, DHS's Joint Requirements Integration and Management System Instruction Manual outlines detailed guidelines and procedures for development of an acquisition program's Mission Needs Statement and Operational Requirements Document, consistent with DHS's acquisition management policy.[19] However, guidance for developing acquisition documentation in DHS's November 2015 Systems Engineering Life Cycle Instruction and accompanying 2016 Guidebook—which outline the technical framework underlying DHS's acquisition management system—does not reflect current requirements in DHS's acquisition management policy.[20] PARM officials told us that the Systems Engineering Life Cycle Instruction and Guidebook are being updated to reflect the current acquisition management policy. However, this effort has been ongoing for over a year and will also affect the time frames in which programs are required to develop other key acquisition documents, including systems engineering life cycle tailoring plans.

Systems engineering life cycle technical reviews provide a mechanism for management to assess how well a program or project has completed planned activities and readiness to continue to the next planned activity. These reviews can be tailored to the unique characteristics of each program or project, and the details regarding the program or project's specific scope, content, and schedule are provided in systems engineering life cycle tailoring plans. DHS specifies in its Systems Engineering Life Cycle Guidebook that the systems engineering life cycle

[19]DHS Instruction Manual 107-01 -001-01, Department of Homeland Security Manual for the Operation of the Joint Requirements Integration and Management System (Apr. 21, 2016).

[20]DHS Instruction 102-01-103, Systems Engineering Life Cycle (Nov. 5, 2015); DHS Guidebook 102-01-103-01, Systems Engineering Life Cycle Guidebook (Apr. 18, 2016).

tailoring plan is a living document that needs to accurately reflect the program or project's current state and any changes in approach. As such, the Instruction and Guidebook specify that these plans are to be approved no later than ADE 2B and should be updated, as necessary, at ADE 2C and ADE 3. While a prior version of DHS's acquisition management policy required the development of systems engineering life cycle tailoring plans at ADE 2B, the current acquisition policy calls for the development of these plans earlier in the acquisition cycle, at ADE 2A, and does not refer to updates at subsequent milestones. PARM officials told us that the updated Systems Engineering Life Cycle Instruction and Guidebook will align with the current acquisition policy to require the development of the systems engineering tailoring plan at ADE 2A.

In September 2020, PARM officials acknowledged that the information related to the development of acquisition documents, including the systems engineering life cycle tailoring plan, should be consistent across all of DHS's policies, instructions, and guidebooks. Inconsistent agency-wide guidance can lead to a lack of clarity on when programs should submit their program documentation. In addition, PARM officials explained that although the acquisition policy requires programs to develop the plan at ADE 2A, it should also require programs to provide updates at subsequent ADEs to reflect the current status of the program. PARM officials stated that they plan to update the acquisition instruction to include updating of the systems engineering life cycle tailoring plan as it is outlined in the Systems Engineering Life Cycle Instruction and Guidebook. PARM officials told us that the updated System Engineering Life Cycle Instruction and Guidebook will continue to call for updates to the plan, when necessary, as subsequent milestones.

Information DHS Provides to Congress Lacks Context on Acquisition Program Risks

Summary information for each major acquisition program that DHS provides to congressional committees lacks important programmatic context necessary to understand the current status of the program, including the risks facing each program that could affect its outcome. The Joint Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2019, contained a provision for DHS to provide quarterly briefings on summary ratings for all Level 1 and 2 acquisition programs.[21] In response to this provision, DHS provides a list of major

[21]The DHS Chief Acquisition Officer has been directed to provide quarterly briefings on summary ratings for all Level 1 and Level 2 acquisition programs to appropriations committees. H. R. Rep. No. 116-9, at 473 (Feb. 13, 2019 Conf. Rep.), accompanying Consolidated Appropriations Act, 2019 (H.J. Res. 31), Pub. L. No. 116-6, 133 Stat. 13; H.R. Rep. No. 115-948, at 12 (Sept. 12, 2018).

acquisition programs with a summary rating on a scale of 1 to 5, with 5 being the best program health score, among other administrative information.

We found that, while DHS was providing the briefings described in the Joint Explanatory Statement, the summary rating information does not provide important contextual information with regard to the risks facing the programs. For example, the summary rating for the U.S. Coast Guard's Polar Security Cutter was a 4.4 in the February 2020 briefing, but does not convey the significant risks associated with the program's accelerated schedule.

To develop its briefings to congressional committees, DHS leverages an internal report that it uses to inform DHS's senior leadership on the status of acquisition programs—the Acquisition Program Health Assessment (APHA). This report assesses programs on up to 11 categories. These categories include, for example, financial management, schedule, and capability performance. The summary ratings DHS provides in its quarterly briefings to the appropriations committees are calculated by assigning a weighted percentage to each of the 11 category ratings in the APHA to develop a single program rating on a scale of 1 to 5. The APHA also includes a narrative that provides context on where programs are in the acquisition life cycle and current risks—contextual information not provided to the appropriations committees. For example, several programs included in the APHA identify potential funding shortfalls or potential schedule breaches. Additionally, there are programs that established or plan to establish multiple APBs, and the summary rating does not capture the specifics of each APB. For example, the Border Wall Systems Program establishes a baseline for each fiscal year based on available funding, and each baseline has specific cost, schedule, and performance parameters that are subject to DHS's breach policy. In April 2020, this program was in breach of its schedule goals in one of its baselines, was meeting its goals in another, and was developing a third baseline. However, in the summary rating provided to congressional committees in April 2020, DHS only provided decision makers with the program's summary rating and identified that the program was in breach. The information DHS provided lacked context that would have helped committee staff understand which baseline was breached, the types of breaches, and the program's risks as a result of the breaches.

In September 2020, PARM officials told us they offered to provide in-person briefings to the appropriations committees to supplement the information provided in the summary ratings. However, these officials said

that on multiple occasions the in-person briefings were cancelled due to scheduling conflicts. Also in September 2020, staff from the Homeland Security Subcommittees for the Senate and House Committees on Appropriations told us that the summary ratings currently provided quarterly by DHS do not include information on the programs' cost, schedule, and performance risks that would help the committees understand potential outcomes for the programs. In its direction to DHS in the 2019 Explanatory Statement, the House Committee on Appropriations said it was reminding the Chief Acquisition Officer that briefings on summary ratings were supposed to be provided quarterly. Committee staff explained that the provision for DHS to provide quarterly briefings with summary ratings was included in the Explanatory Statement after the Comprehensive Acquisition Status Report (CASR) requirement ended in 2017.[22]

Previously, the CASR provided congressional appropriations committees with programmatic data and evaluative information, such as a program's current acquisition phase, lifecycle cost, and a rating of cost, schedule, and technical risks for each major acquisition on DHS's Master Acquisition Oversight List. According to both committee staff and DHS leadership, providing the CASR in a timely manner was a significant challenge for the department and as a result, information included in the CASR was often out of date by the time it was delivered. Committee staff told us that DHS was relieved of the CASR reporting requirement because they recognized the significant level of effort it took the department to develop the report and because they now receive some of information that was included in the CASR through other sources. For example, committee staff and DHS leadership told us some information previously provided in the CASR is now available in acquisition decision memorandums, which the department provides on a regular basis, and budget justification documents. However, committee staff said that the committees need additional details beyond the information provided

[22]The Fiscal Year 2012 DHS Appropriations Act required the Under Secretary for Management to submit a CASR for fiscal year 2013, and an associated conference report contained the specific information to be included in the CASR. See the Consolidated Appropriations Act, 2012, Pub. L. No. 112-74, 125 Stat. 786, 944, (2011) and H.R. Rep. No. 112-331, at 950 (2011) (Conf. Rep.). This requirement was repeated in subsequent Appropriations Acts. In 2015, GAO recommended DHS update the template used to develop the CASR to include additional information. However, the CASR requirement was not included in the 2017 Appropriation Act and the template was not used to complete a report. See GAO, *Homeland Security Acquisitions: DHS Should Better Define Oversight Roles and Improve Program Reporting to Congress,* GAO-15-292 (Washington, D.C.: Mar. 12, 2015).

through these other sources and the summary ratings currently provided by DHS. For example, they said that program-specific cost, schedule, performance, and risk information would be helpful. Determining what cost, schedule, performance, and programmatic risk information is needed for DHS's major acquisition programs—along with the reporting time frames and the appropriate mechanism to provide the information—would help ensure that decision makers have needed context.

Standards for Internal Control in the Federal Government call for the communication of quality information from relevant and reliable data and that is appropriate, complete, and timely, among other things.[23] The single summary ratings for each program provided by DHS do not delineate key factors driving the rating such as program status, cost, schedule, performance, and associated risks, which are important to understand a program's health. Although DHS provides summary ratings for its major acquisition programs to the appropriations committees, as currently directed, this information does not provide congressional decision makers with the context to help make informed decisions and conduct effective oversight.

Conclusions

DHS's mission to safeguard the American people and homeland requires a broad portfolio of acquisitions. Since we began reviewing DHS's portfolio of major acquisitions in 2015, the department strengthened implementation of its policies to improve acquisition oversight. DHS recently updated its acquisition policy to better reflect acquisition leading practices and to implement a 2017 GAO recommendation, changing the timing of when a program establishes its initial baseline to occur after key system engineering reviews. But opportunities remain for DHS to ensure requirements in its Systems Engineering Life Cycle Instruction and Guidance align with its acquisition policy. Inconsistent acquisition management and systems engineering policies and guidance can lead to a lack of clarity on when programs should submit their program documentation and, as a result, program officials may not provide DHS leadership with timely information related to program changes as they are made during the acquisition life cycle.

In addition, we found while DHS is currently following the direction for congressional reporting related to the status of its major acquisition programs, the information provided lacks the context the appropriations

[23]GAO, *Standards for Internal Control in the Federal Government,* GAO-14-704G (Washington, D.C.: Sept. 10, 2014).

committees need to help inform decisions. Without more information on the current status of DHS's major acquisition programs and the risks these programs are facing that might affect future performance, congressional decision makers lack key information to inform their critical oversight responsibilities and budgetary decisions.

Matter for Congressional Consideration

Congress should consider determining what information on cost, schedule, and performance risks for DHS Level 1 and 2 acquisition programs it needs to inform oversight and determine the appropriate reporting mechanisms for DHS to provide that information. (Matter for Consideration 1)

Recommendation for Executive Action

The Secretary of Homeland Security should ensure that the Undersecretary for Management ensure the requirements for establishing key acquisition documentation in the acquisition management instruction and Systems Engineering Life Cycle Instruction and Guidebook align, to include requirements for the systems engineering life cycle tailoring plans. (Recommendation 1)

Agency Comments

We provided a draft of this report to DHS for review and comment. DHS's comments are reproduced in appendix III. DHS also provided technical comments which we incorporated as appropriate. In its comments, DHS concurred with our recommendation and identified actions it planned to take to address them.

We are sending copies of this report to the appropriate congressional committees and the Acting Secretary of Homeland Security. In addition, the report is available at no charge on the GAO website at https://www.gao.gov.

If you or your staff have any questions about this report [or testimony], please contact me at (202) 512-4841 or makm@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 IV.

Marie A. Mak
Director, Contracting and National Security Acquisitions

List of Committees

Chair
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

Chair
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
United States Senate

Chair
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
House of Representatives

The Honorable Bennie Thompson
Chairman
The Honorable John Katko
Ranking Member
Committee on Homeland Security
House of Representatives

Appendix I: Program Assessments

This appendix presents individual assessments for the 30 Department of Homeland Security (DHS) major acquisition programs we reviewed. Each assessment presents information current as of September 2020. The assessments include standard elements, such as an image, a program description, and summaries of the program's progress in meeting cost and schedule goals, and key program information, such as baseline quantities. In addition, the assessments provide summaries of the program execution, performance and testing activities, and program management-related issues, as applicable. The information presented in these assessments was obtained from DHS documentation, answers to our questionnaire by DHS officials, and interviews with DHS and program officials, and includes our analysis of program information. Each assessment also includes the following figures:

- Acquisition Program Baseline (APB) vs. Current Estimate. This figure compares the program's cost thresholds from the initial APB approved after DHS's acquisition management policy went into effect in November 2008 and the program's current DHS-approved APB to the program's expected costs as of September 2020. The source for the current estimate is the most recent cost data we obtained (i.e., a department-approved life-cycle cost estimate, updated life-cycle cost estimates submitted during the resource allocation process to inform the fiscal year 2021 budget request, or a fiscal year 2020 annual life-cycle cost estimate update). Costs shown are based on the program's APB threshold costs and are presented in then-year dollars. For consistency in reporting, we use the terms procurement, construction and investment (PC&I) and operations and support (O&S) when describing costs in these assessments
- Program Costs for Fiscal Year 2021–2025. This figure provides the programs' estimated acquisition, operations and sustainment, and total estimated costs for fiscal years 2021-2025.
- Schedule. This figure consists of a timeline that identifies key milestones for the program. The timeline identifies when the program completed or expected to reach its major milestones as of September 2020. Dates shown are based on the program's APB threshold dates or updates provided by the program office.

Lastly, each program assessment summarizes comments provided by the program office and identifies whether the program provided technical comments.

CONTINUOUS DIAGNOSTICS AND MITIGATION (CDM)

CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (CISA)

The CDM program aims to strengthen cybersecurity of the federal government's networks by continually monitoring and reporting vulnerabilities at more than 65 civilian agencies. The CDM program will provide four capabilities: Asset Management reports vulnerabilities in hardware and software; Identity and Access Management focuses on user access controls; Network Security Management will report on efforts to prevent attacks; and Data Protection Management will provide encryption to protect network data.

Source: Cybersecurity and Infrastructure Security Agency. | GAO-21-175

KEY FINDINGS

Program costs exceed cost thresholds due to evolving requirements.

Program plans to revise its baseline to include Data Protection Management efforts.

According to CISA officials, program is currently meeting its schedule goals.

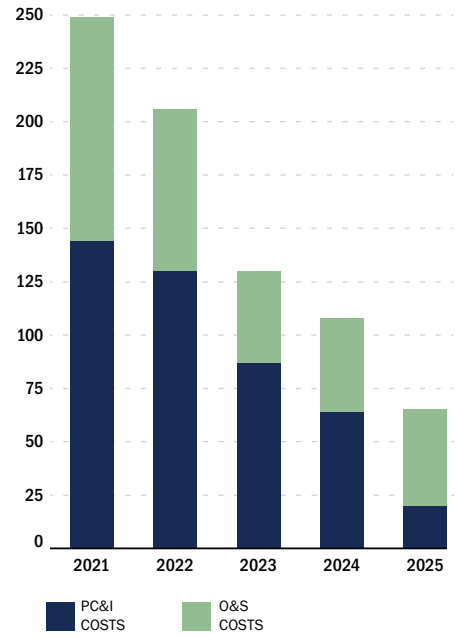
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (06/2013)	2,076	1,173	3,249
Current APB (06/2017)	2,007	648	2,655
Current estimate (04/2019)	1,781	980	2,762

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

The CDM program is currently focused on deploying three capabilities—Asset Management, Identity and Access Management, and Network Security Management.

In April 2019, the program updated its life-cycle cost estimate (LCCE), which exceeds its O&S and total life-cycle cost thresholds by approximately $332 million and $107 million, respectively. The program's cost increase is primarily attributed to evolving requirements described in the explanatory statements accompanying recent Appropriations Acts and the Office of Management and Budget (OMB) directing the program to cover certain sustainment costs. Specifically, CISA officials said the program received $110 million above the Presidential Budget Request and noted this was to accelerate procurement of CDM capabilities for additional agencies not in the original program scope and accelerate mobile cloud computing visibility across the .gov domain, among other things. In addition, the program received funding in 2018 and 2019 after OMB directed the CDM program to cover certain costs of sustaining licenses for supported agencies.

In fiscal year 2020, the Explanatory Statement accompanying the Consolidated Appropriations Act, 2020 described an additional $75.9 million above what was requested, which the program plans to use, in part, to provide Data Protection Management capabilities. CISA officials said the program is revising its acquisition documentation, including its acquisition program baseline (APB) and LCCE to include Data Management capabilities and inform an acquisition decision event (ADE) 2A, which they plan to achieve by March 2021. These officials noted that the acquisition documentation will also be revised to reflect the increased demand for CDM's other capabilities. Program officials stated the program has experienced delays in initiating Data Protection Management efforts as a result of the fiscal year 2019 partial government shutdown and funding shortfalls.

CISA officials said the program is meeting its current schedule goals. The program's initial operational capability (IOC) for Network Security Management in December 2019 was removed from the program's APB because CISA officials determined the milestone was obsolete.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1
Capabilities Provided	1) Asset Management 2) Identity and Access Management 3) Network Security Management 4) Data Protection Management

TEST EVENT

OT&E of DHS capabilities	TBD

KEY FINDINGS

Progress in achieving operational effectiveness is limited and testing is not sufficient to assess operational suitability and cyber resilience.

Agencies have not sufficiently integrated CDM capabilities into their cybersecurity processes.

Staffing gaps may affect program execution.

PROGRAM PERFORMANCE AND EXECUTION

OPERATIONAL TEST AGENT (OTA): INSTITUTE FOR DEFENSE ANALYSES

In 2017, the program refined its key performance parameters to reflect five main functions of cyber security—identification, protection, detection, response, and recovery. The CDM program is only authorized to conduct testing on DHS networks, which means the other departments and agencies are responsible for testing the CDM tools on their own networks. CISA officials reported that five other agencies have conducted operational studies. These studies provide the program with informal observations on implementation and were used to support the determination of IOC for the Identity and Access Management capability. Under the program's current test and evaluation master plan, the OTA plans to perform operational assessments (OA) on DHS's network to incrementally demonstrate each capability as it is deployed and to reduce risk prior to conducting program-level operational test and evaluation (OT&E).

In January 2020, DHS's Director, Office of Test and Evaluation (DOT&E) assessed the results of several operational studies for Identity and Access Management, an OA for Asset Management, and several system integration tests at civilian departments and agencies that were conducted by the program's OTA between February and June 2019. DOT&E determined that the CDM program is not making sufficient progress towards achieving operational effectiveness and that testing has been insufficient to assess progress towards operational suitability and cyber resilience. DOT&E found that agencies have not sufficiently integrated CDM capabilities into their cybersecurity processes to demonstrate progress towards the intended improvements in cyber situational awareness, security posture, and reporting, but noted that the CDM has limited control over these issues. DOT&E made several recommendations to CISA, the OTA, and the program.

For example, DOT&E recommended that CISA identify ways to help agencies integrate CDM capabilities into cybersecurity processes and identify ways to increase agency involvement in test activities. DOT&E recommended that the program, in coordination with the OTA, conduct an OA and OT&E on CDM implementation within DHS. In addition, DOT&E recommended the program update its test and evaluation master plan to integrate lessons learned prior to establishing baseline goals for Data Protection Management. CISA officials stated they have taken steps to address DOT&E's recommendations. For example, they stated that program officials were coordinating with the OTA and DHS components to develop plans for the OA, which will inform the development of the test and evaluation master plan.

CISA officials told GAO that the program has initiated efforts to pilot several systems to inform its Data Protection Management efforts. These officials noted that the Data Protection Management effort will likely require multiple tools and systems to achieve objectives, but the piloted efforts are still in the early stages. In August 2020, CISA officials said they continue to face workforce challenges primarily as a result of the lengthy hiring process. The program is coordinating with CISA officials to address the staffing gaps and leveraging contractors, when possible, but noted that the program is at risk of experiencing schedule delays.

GAO reported on the CDM program in August 2020 (GAO-20-598) and made a total of 15 recommendations, of which six recommendations were to DHS. As of September 2020, all 15 of the recommendations remain open.

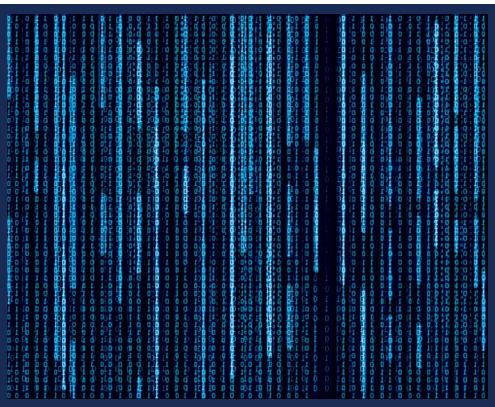
PROGRAM OFFICE COMMENTS

CISA officials stated that in addition to efforts identified in this assessment, the program continues to deploy CDM tools to improve performance and improve data quality. These officials stated that the program awarded a contract in fiscal year 2020 which will help ensure continuation of shared services to select agencies. Further, CISA officials said the program has been working with its OTA and DOT&E to improve operational test and evaluation of CDM capabilities. CISA officials also provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

NATIONAL CYBERSECURITY PROTECTION SYSTEM (NCPS)

CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (CISA)

NCPS is intended to defend the federal civilian government from cyber threats. NCPS develops and delivers capabilities through a series of "blocks." Blocks 1.0, 2.0, and 2.1 are fully deployed and provide intrusion-detection and analytic capabilities across the government. The NCPS program is currently deploying EINSTEIN 3 Accelerated (E3A) to provide intrusion-prevention capabilities and plans to deliver block 2.2 to improve information sharing across agencies.



Source: National Cybersecurity Protection System. | GAO-21-175

KEY FINDINGS

Program declared a schedule breach in January 2020.

Program plans to assess end-user requirements and restructure as part of its re-baseline.

Program's most recent cost estimate does not reflect anticipated program changes.

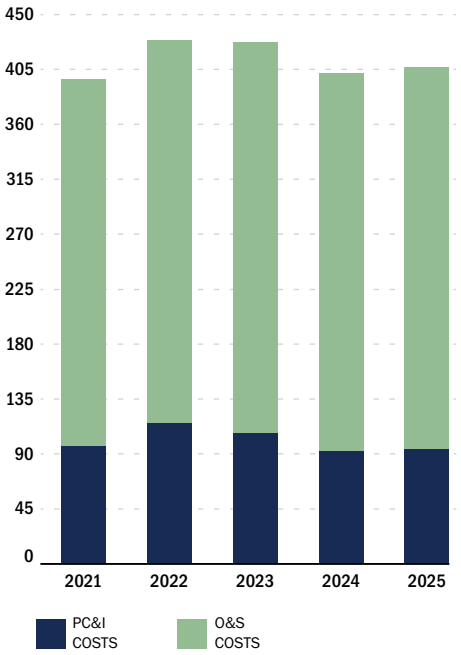
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (02/2009)	1,029	922	1,951
Current APB (10/2018)	1,627	4,281	5,908
Current estimate (01/2020)	1,632	4,745	6,378

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In January 2020, the program declared a schedule breach as a result of delays experienced while revising the program's operational requirements document (ORD) and concept of operations (CONOPS), which DHS leadership required to inform acquisition decision event (ADE) 3 for block 2.2. DHS leadership granted NCPS ADE 2C approval for block 2.2 to deploy additional capabilities and ADE 3 approval of E3A to transition to sustainment in February 2018. At that time, DHS leadership directed NCPS to address several issues identified during test events that informed the block 2.2 ADE, among other things. Specifically, the program was directed to review the ORD and CONOPS to ensure that they accurately reflect the expected mission environment and processes, among other things. According to CISA officials, the program experienced significant delays in coordinating with end users as a result of CISA's reorganization and rapidly changing priorities. The program's ADE 3 threshold date for block 2.2 previously slipped by 2 years—from March 2019 to March 2021.

In August 2020, CISA officials told GAO they now plan to restructure the program after fully assessing the requirements of end users, but they were unsure when acquisition documents—including the life-cycle cost estimate (LCCE) and acquisition program baseline (APB)—would be revised to reflect program changes.

The program previously updated its APB in October 2018 to correct an error that resulted in an inaccurate account of the program's sunk costs, among other things. Once corrected, the program's total life-cycle cost threshold was $5.9 billion—$1.7 billion more than in the program's prior APB. The program updated its LCCE in January 2020, which exceeds the program's current APB cost thresholds. However, this LCCE accounts for program costs through 2026, while the APB only accounts for costs through 2024. Further, this LCCE does not account for the program's changes as a result of the program restructuring.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1

TEST EVENT

Block 2.2 OT&E	TBD
E3A Follow-on OT&E	12/2018
Block 2.2 Operational Assessment	10/2017

KEY FINDINGS

Officials said they revised the program's CONOPS document in December 2019.

Program plans to conduct additional follow-on testing for E3A in fiscal year 2021.

Program continues to face staffing challenges, which may affect program execution.

PROGRAM TESTING AND EXECUTION

OPERATIONAL TEST AGENT (OTA): INSTITUTE FOR DEFENSE ANALYSES

In January 2018, DHS's Director, Office of Test and Evaluation (DOT&E) determined that it was too soon to assess block 2.2 based on the operational assessment (OA) results from October 2017, but noted block 2.2 was at risk of not meeting current user needs and made a number of recommendations, including reviewing the ORD and CONOPS and conducting another OA before conducting initial operational test and evaluation (OT&E). CISA officials told GAO that the operator's processes had changed since the initial ORD and CONOPS were approved. DHS officials stated that updating these documents is necessary primarily because of the evolving threats the program needs to address. In December 2019, the program completed its CONOPS but, as of August 2020, had not yet completed updates to the ORD. Program officials stated that they are coordinating with CISA officials and end users, who must review the ORD, to confirm updates. The program plans to incorporate these changes as they restructure the program and revise acquisition documentation.

In January 2018, DOT&E determined E3A met its key performance parameters for coverage, accuracy, and timeliness based on an assessment of initial OT&E results. However, testing was not adequate to assess cybersecurity, and DOT&E determined E3A was operationally effective with limitations primarily because it lacks the ability to share threat information. In December 2018, the OTA completed follow-on OT&E for E3A, which included an assessment of cyber resilience for only one of the program's three internet service providers. In June 2019, DOT&E determined E3A was cyber resilient with limitations and recommended further cyber resilience testing to assess the other providers and any new capabilities once deployed. The scope of testing suitability was limited, but concerns with staffing and lack of procedures led to DOT&E's rating of operational suitability with limitations.

DOT&E also recommended that the program continue to work on improving E3A effectiveness by integrating automated information sharing solutions and data analysis tools, among other things. In August 2020, CISA officials stated they were working on enhancements to address E3A effectiveness and plan to begin additional follow-on testing in fiscal year 2021.

Since May 2015, CISA officials stated that E3A intrusion-prevention capabilities have been primarily provided through sole source contracts with internet service providers and a contract to provide basic intrusion-prevention services. In December 2015, Congress required DHS to make certain capabilities available for use by federal civilian agencies, such as those provided by NCPS's E3A to prevent network traffic associated with certain cybersecurity risks by December 2016. By December 2016, NCPS had integrated E3A at approximately 93 percent of federal civilian agencies and departments and, in November 2020, CISA officials reported that NCPS was integrated at up to 99 percent, with mainly small and micro organizations remaining.

In August 2020, CISA officials said that they continue to face staffing challenges and if the program's staffing gap is not addressed, the program may experience additional delays. CISA officials told GAO that the federal hiring process and DHS's lengthy suitability screening process have made recruitment efforts challenging because qualified candidates often find other employment while waiting for these processes to be completed.

PROGRAM OFFICE COMMENTS

In addition to the efforts identified in this assessment, CISA officials stated that the needs of the NCPS user community have evolved since the program's initiation and some technologies are more than 17 years old. Mission needs and information sharing technology has changed, among other things. As a result, the NCPS program plans to restructure. Once a new program structure is approved by DHS leadership, the program will update its acquisition documentation accordingly. CISA officials also provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

NEXT GENERATION NETWORKS PRIORITY SERVICES (NGN-PS) PHASE 1 AND PHASE 2

CYBERSECURITY AND INFRASTRUCTURE SECURITY AGENCY (CISA)

CISA's NGN-PS programs are intended to address an emerging capability gap and enhance the government's emergency telecommunications service. The NGN-PS Phase 1 program will provide priority phone service for select officials when networks are overwhelmed. The Phase 2 program will provide data and video priority services. CISA executes these programs through commercial telecommunications service providers, which addresses the government's requirements as they modernize their networks.

Source: DHS. | GAO-21-175

KEY FINDINGS

NGN-PS Phase 1 program is focused on development and deployment of wireless and landline capabilities.

NGN-PS Phase 1 program O&S costs exceed the program's O&S cost threshold.

NGN-PS Phase 2 program plans to achieve ADE 2A and establish a preliminary baseline in March 2021.

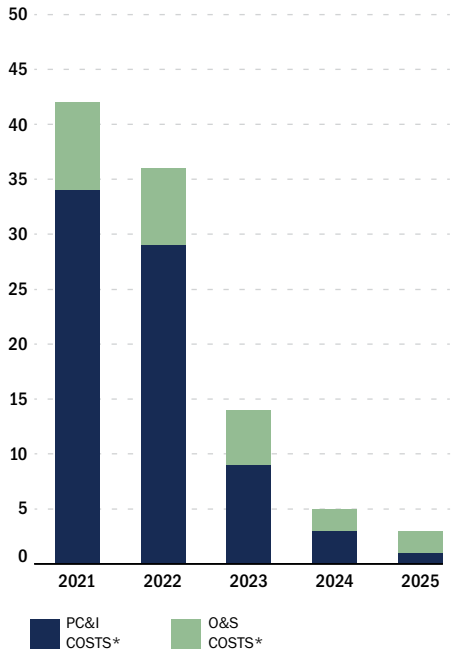
APB THRESHOLDS VS. CURRENT ESTIMATE*

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB* (01/2011)	244	469	713
Current APB* (04/2018)	759	0	759
Current estimate* (01/2020)	627	34	662

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

CISA previously planned to deploy capabilities for voice, data, and video priority services through a single program. However, in October 2018, DHS leadership approved CISA's request to separate the efforts into two acquisition programs.

The NGN-PS Phase 1 program is an acquisition only program that is developing and delivering prioritized voice capability in three increments. Increment 1 maintains current priority service on long distance calls as commercial service providers update their networks. Increment 2 delivers wireless capability and will provide secure mobile communications. Increment 3 will deliver landline capability for voice over internet protocol. Once operational, capabilities acquired by NGN-PS Phase 1 are transferred to CISA's Priority Telecommunications Service (PTS) program for sustainment.

In October 2018, the NGN-PS Phase 1 program achieved full operational capability (FOC) of Increment 1 and has since focused on development and deployment of Increments 2 and 3. The program achieved initial operational capability (IOC) of increment 3 in March 2020 and plans to achieve FOC for Increments 2 and 3 in December 2022 and December 2025, respectively.

In January 2020, the NGN-PS Phase 1 program updated its life-cycle cost estimate (LCCE)—which officials stated is within its acquisition program baseline goals (APB). CISA officials told GAO that, although NGN-PS has an O&S cost threshold of $0, the program's LCCE includes O&S costs for CISA's working capital fund and shared services for program management. CISA officials added that including these costs as O&S in the LCCE aligns with CISA's current Budget, Finance and Acquisition guidance. CISA officials also stated they do not plan to update the program's APB to reflect the addition of certain O&S costs.

The NGN-PS Phase 2 program is in the process of completing key acquisition documents, including the program's initial LCCE and preliminary APB. According to CISA officials, the program anticipates it will achieve ADE 2A by March 2021.

*NGN-PS PHASE 1 COSTS ONLY

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level of both NGN-PS Phase 1 and NGN-PS Phase 2	2
Requirement Derived From	Executive Order and Presidential Policy Directive
NGN-PS Phase 1 Increments	**Increment 1:** Updates to networks **Increment 2:** Wireless capability **Increment 3:** Landline capability

TEST EVENT

Operational assessment	03/2017

KEY FINDINGS

NGN-PS Phase 1 met four of its six KPPs. Remaining two KPPs have not been fully tested.

NGN-PS Phase 1 has experienced some testing delays as a result of COVID-19.

Assessments of COVID-19 may inform future development work for both NGN-PS programs.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): JOHNS HOPKINS UNIVERSITY

NGN-PS was established in response to an executive order requiring the federal government to have the ability to communicate at all times during all circumstances to address national security issues and manage emergencies. A Presidential Policy Directive issued in July 2016 superseded previous directives requiring continuous communication services for select government officials. According to CISA officials, the new directive validates requirements for NGN-PS Phases 1 and 2.

NGN-PS Phase 1 capabilities are evaluated through developmental testing and operational assessments conducted by service providers on their own networks. CISA officials review the service providers' test plans, oversee tests to verify testing procedures are followed, and approve test results to determine when testing is complete. The OTA then leverages the service providers' test and actual operational data to assess program performance. In addition, CISA officials said that they continuously review actual NGN-PS performance and service providers undergo annual network service verification testing under the PTS program.

CISA officials reported that the NGN-PS Phase 1 program continues to meet four of the program's six key performance parameters (KPP), but DHS's Director, Office of Test and Evaluation (DOT&E) has not validated the program's performance. In March 2017, the program completed an operational assessment of Increment 1. DOT&E found that there were sufficient data to indicate a high probability of satisfying operational effectiveness and suitability requirements and recommended that NGN-PS update the test and evaluation master plan (TEMP), including a threat assessment and plan for operational test and evalution of cyber resilience, among other things. The program's revised TEMP for Increment 2 was approved in July 2020 to reflect these changes and CISA officials reported the TEMP for Increment 3 is under final review. According to CISA officials, the telecommunication service providers are required to address how NGN-PS Phase 1 services are protected from cyber threats on their networks. These officials noted that the equipment for calls used for priority services is also used by the telecommunications service providers in their commercial enterprise services, and NGN-PS Phase 1 capability is given the same cybersecurity protections as those services.

The program plans to test its remaining two KPPs after Increment 2 capabilities are deployed. In May 2020, CISA officials told GAO that the program experienced some delays in Increment 2 developmental testing as a result of COVID-19. To mitigate risk of these delays affecting APB goals, the program worked with the telecommunications service providers to identify Increment 2 capabilities that could be tested remotely. As a result, the service providers conducted some Increment 2 tests remotely, but delayed other tests until engineers can return to testing facilities.

DHS officials reported that the COVID-19 situation has led to an unforeseen and unprecedented nationwide telework posture, which has stressed the telecommunication providers' networks in unanticipated ways. According to CISA officials, assessments of the response to the COVID-19 situation may inform new requirements and future development work for both NGN-PS programs.

PROGRAM OFFICE COMMENTS

CISA officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

HOMELAND ADVANCED RECOGNITION TECHNOLOGY (HART)

DHS OFFICE OF BIOMETRIC IDENTITY MANAGEMENT (OBIM)

HART will replace and modernize DHS's legacy biometric identification system—known as IDENT—that shares information on foreign nationals with U.S. government and foreign partners to facilitate legitimate travel, trade, and immigration. The program plans to use an incremental developmental approach to provide capabilities and is focused on Increment 1, which is the infrastructure necessary to operate HART. Increment 2 and future capabilities are intended to provide additional capabilities including a web portal and new tools for analysis and reporting.

HART HOMELAND ADVANCED RECOGNITION TECHNOLOGY ™

Source: Office of the Under Secretary for Management. | GAO-21-175

KEY FINDINGS

Program is in breach of its cost and schedule goals.

Program is revising key acquisition documents to reflect additional work necessary to resolve development issues and program changes.

Additional funding will be necessary to develop HART and sustain IDENT.

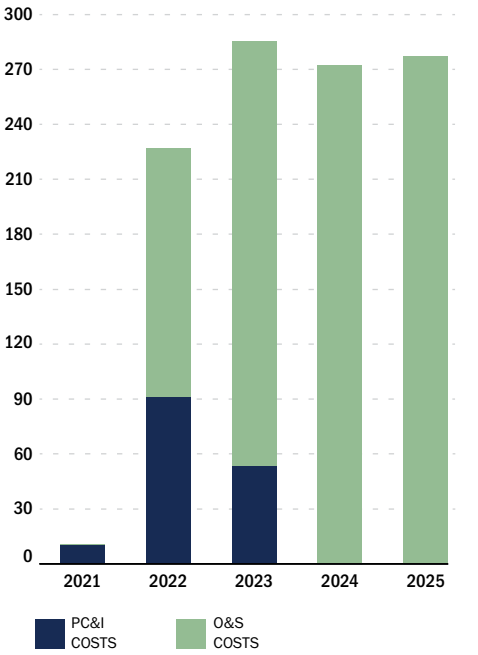
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (04/2016)	273	5,563	5,836
Current APB (05/2019)	214	3,709	3,923
Current estimate (05/2020)	315	3,999	4,314

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



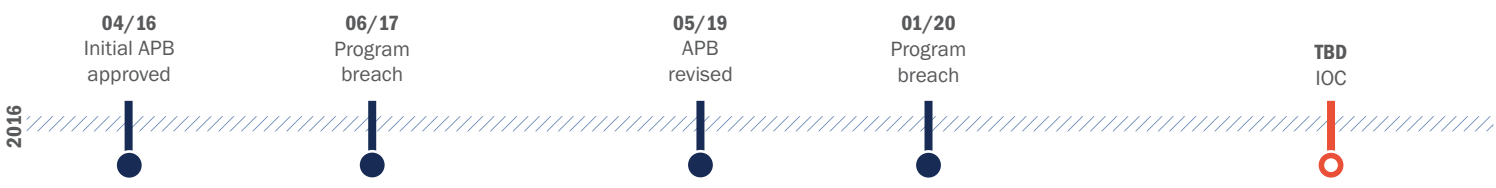
COST AND SCHEDULE

In January 2020, HART officials declared a schedule breach—8 months after re-baselining the program in response to a prior breach—because of difficulties developing the database architecture and file storage technology for Increment 1. HART officials reported that additional work necessary to resolve these issues coupled with changes in the program's technical approach intended to reduce risk to customers during the transition from IDENT to HART will require modifications to the contract. As a result of these issues, the program is unable to begin transitioning from using IDENT to HART to meet its initial operational capability (IOC) threshold date of December 2020 or any of its subsequent acquisition program baseline (APB) milestones. This is a significant challenge because IDENT is at risk of failure and additional investments are necessary to keep the system operational. The program's IOC date previously slipped by 2 years and full operational capability slipped nearly 3 years due to a prior schedule breach.

In May 2020, the program also declared a cost breach after updating its life-cycle cost estimate (LCCE) which exceeded its APB cost thresholds. This LCCE included an initial estimate of costs associated with the anticipated program changes, but HART officials reported the contract was not modified to account for the additional work until August 2020. As of September 2020, the program was in the process of revising key acquisition documentation—including the program's schedule, LCCE, and APB—to account for the additional work outlined in the contract modifications.

The HART program anticipates an affordability gap of approximately $142 million between fiscal years 2022 and 2025, which officials primarily attributed to changes in the program's schedule. The program plans to request the use of surplus funding from 2021 to offset the shortfall in fiscal year 2022 and coordinate with DHS officials during the resource allocation process to address the gaps in the remaining years. Officials stated that $182 million was requested in fiscal year 2021 and they project an additional $32 million in fiscal year 2022 will be necessary to sustain IDENT. These officials noted that additional funding for IDENT may be necessary, but the total would not be evaluated until the IOC date for HART is established.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1
Acquisition Approach	Incremental
Prime Contractor	Northrop Grumman

KEY FINDINGS

Program revised its KPPs in May 2019.

Program determined the contractor's technical approach was not feasible.

According to officials, the program modified the contract to address lessons learned and implement new approach to development.

PROGRAM PERFORMANCE AND EXECUTION

OPERATIONAL TEST AGENT (OTA): JOINT INTEROPERABILITY TEST COMMAND

The program updated its operational requirements document (ORD) in May 2019 and revised its key performance parameters (KPP) to address evolving DHS biometric requirements. Specifically, the KPPs for increment 1 establish requirements for system availability, a fingerprint biometric identification service, as well as fingerprint search accuracy. Increment 2 KPPs establish requirements for multimodal biometric verification services and interoperability with a Department of Justice system. KPPs for future capabilities establish requirements for a web portal response time and reporting capabilities. However, in September 2020, HART officials said they were in the process of revising the program's ORD to reflect additional program changes, including updates to the program's schedule milestones.

DHS's Science and Technology Directorate's (S&T) Office of Systems Engineering completed a technical assessment on HART in February 2016 and concluded that the program had a moderate overall level of technical risk. In October 2016, DHS leadership directed HART to work with S&T to conduct further analysis. In March 2019, S&T updated risks identified in the technical assessment and evaluated the program's scalability, availability, cybersecurity, and performance modeling risks for the HART system. S&T made several recommendations for the program to consider as it addresses identified risks.

In late fiscal year 2019, a technical review was initiated by the HART contractor to review its work to date and its technical approach for the database architecture. According to HART officials, the contractor reported that its technical approach was satisfactory and provided the program with some lessons learned. According to HART officials, the program awarded a contract modification in September 2019 that addressed the lessons learned and results of the analysis completed by the contractor. However, during technical demonstrations, the contractor was only able to demonstrate availability of the system; it was not able to demonstrate scalability and integrity. The program subsequently initiated three independent analyses of the contractor's technical approach and all indicated that the technical approach being pursued was not feasible. HART officials said they awarded a second contract modification in August 2020 that clarified and added new requirements, outlined changes to the program's plans for development, and provided for the evaluation of contractor proposed risk reduction approaches.

In September 2020, HART officials said they are revising the program's schedule and have not yet determined when the program will re-baseline or when it will need to award the development contract for future capabilities.

PROGRAM OFFICE COMMENTS

HART officials provided technical comments on a draft of this assessment, which GAO has incorporated as appropriate.

GRANTS MANAGEMENT MODERNIZATION (GMM)

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

GMM aims to deliver a new system—FEMA Grants Outcomes (FEMA GO)—that is intended to streamline and modernize FEMA's grant management process. The new system will be used for submitting, approving, and managing grants and will replace the nine legacy systems that are currently used to manage over 40 active grant programs. FEMA GO will be used by agency headquarters and regional offices, grant recipients, local governments, and tribal and territorial partners

FEMA GRANTS OUTCOMES

Source: Federal Emergency Management Agency. | GAO-21-175

KEY FINDINGS

The program has yet to update key acquisition documentation as a result of a 2018 cost breach.

Underestimation of scope and complexity of the program led to cost breach and schedule impacts.

Responsibilities from CARES Act impacted program schedule, but mitigation strategy in place.

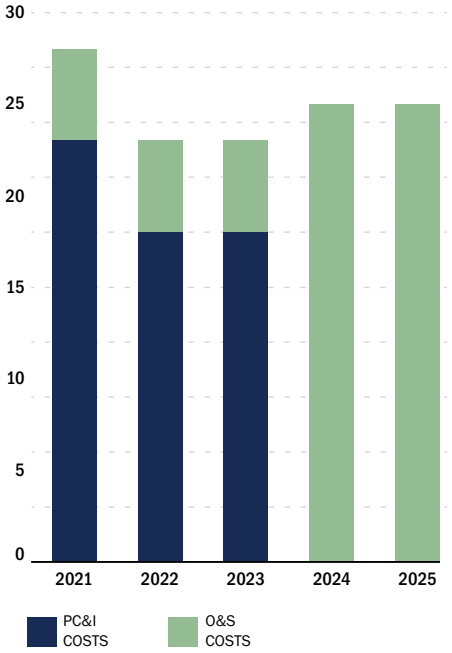
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (05/2017)	121	167	289
Current APB (05/2017)	121	167	289
Current estimate (10/2019)	180	81	261

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In September 2018, FEMA declared a cost breach of GMM's acquisition program baseline (APB) in anticipation of exceeding its cost thresholds, which FEMA officials attribute to an underestimation of the scope and complexity of the program's efforts. The program subsequently declared a schedule breach after officials determined the program would not be able to achieve initial operational capability (IOC) or full operational capability (FOC) by its APB threshold dates.

In September 2020, FEMA officials told GAO the program had not yet completed all key acquisition documents, such as the life-cycle cost estimate (LCCE), to inform the revised APB. According to FEMA officials, DHS's understanding of how to estimate costs for Agile software development—a type of incremental development, which calls for the rapid delivery of software in small, short increments—has improved since the program developed its previous LCCE. As a result, FEMA officials anticipate that the revised LCCE will provide a more accurate estimate. Officials plan to submit the revised LCCE to DHS for approval by December 2020. FEMA officials also reported the program's schedule required adjustments to account for contracting delays, staffing shortfalls, vendor performance, and the 2019 partial government shut down.

The program achieved IOC in March 2020—6 months later than its previously planned threshold date—when grant award management capability through FEMA GO was made available for three grant programs. The program reported it plans to achieve FOC in 2023—more than 3 years later than previously planned.

FEMA was designated as the lead agency for coordinating the overall federal response to COVID-19. The Coronavirus Aid, Relief, and Economic Security (CARES) Act authorized hundreds of millions of dollars of additional grants that will depend on FEMA GO and legacy systems to manage them. Officials told GAO that new grants FEMA is responsible for executing added unanticipated requirements that may affect GMM's schedule. However, program officials plan to mitigate the impact by using additional staff. These officials added that the cost of additional staff is already accounted for in the program's LCCE.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	2
Legacy Systems GMM Replaces	9
Grant Programs Managed	40+

KEY FINDINGS

KPPs updated to reflect new strategy of using a public cloud to host computing infrastructure.

Program's use of Agile software development leads to more frequent testing.

Program is experiencing staffing challenges that may affect program execution.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): GARUD TECHNOLOGY SERVICES, INC.

The program initially planned to rely on a service provider to deliver software applications and the underlying infrastructure to run them. However, FEMA officials said this strategy did not meet end-user needs. As a result, officials explained that the program changed its deployment strategy. Specifically, FEMA plans to develop and deploy its own software applications while relying on a service provider to deliver and manage the computing infrastructure in a public cloud environment. In April 2020, the program updated its operational requirements document to reflect the new strategy and revise its key performance parameters (KPP). FEMA officials reported that the program's KPPs were modified to better reflect the needs of end users and to provide more testable metrics. The program established four KPPs related to cybersecurity, reliability, service availability, and resilience to technical failures.

In July 2020, DHS's Director, Office of Test and Evaluation approved the program's revised test and evaluation master plan. As part of the Agile development methodology, the program's test activities will be integrated into the development process. As increments of capability are released, the OTA will develop reports that will inform acquisition decisions.

PROGRAM EXECUTION

GMM aims to modernize and streamline FEMA's grants management environment through the implementation of the FEMA GO system. To do so, the GMM program established a standard framework intended to represent a common grants management lifecycle. The framework consists of five sequential phases—pre-award, award, post-award, closeout, and post-closeout—along with a sixth phase dedicated to continuous grant program management activities, such as analyzing data, producing reports on grant awards, and managing IT systems. FEMA GO will be implemented within the IT environment that currently exists at FEMA. FEMA GO is intended to replace nine legacy grants management systems and potentially many subsystems. As part of this effort, FEMA will need to migrate, analyze, and standardize its grants management data from its various systems before transitioning it to FEMA GO. Further, the FEMA GO system is expected to interface with a total of 38 other systems, 19 of which are external to DHS. The program plans to achieve FOC when all grants programs are managed through FEMA GO.

In July 2020, FEMA officials reported a total staffing gap of approximately 33 percent, after previously identifying seven critical staffing gaps. In addition, they reported the program's staff are generally not certified to the DHS recommended levels for their designated positions. To address the staffing challenges, the program has leveraged contractor staff, when possible, and adjusted workloads of federal staff to minimize disruptions of service to end users.

In April 2019, GAO made eight recommendations to FEMA to address risks GAO identified with the GMM program. As of October 2020, six recommendations remain open. For additional information see GAO-19-164.

PROGRAM OFFICE COMMENTS

FEMA officials stated that although the program has not yet formally remediated the cost and schedule breaches, the program has mitigated risk, stabilized contracts, and is delivering software in support of FEMA grants. The GMM program's efforts have recently supported the CARES Act COVID-19 grants. FEMA officials also provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

NATIONAL BIO AND AGRO-DEFENSE FACILITY (NBAF)

SCIENCE AND TECHNOLOGY DIRECTORATE (S&T)

The NBAF program is constructing a state-of-the-art laboratory in Manhattan, Kansas, to replace the Plum Island Animal Disease Center. The facility will enable DHS and the Department of Agriculture (USDA) to conduct research, develop vaccines, and provide enhanced diagnostic capabilities to protect against foreign animal, emerging, and zoonotic diseases that threaten the nation's food supply, agricultural economy, and public health.

Source: NBAF Design Partnership. | GAO-21-175

KEY FINDINGS

Program declared a schedule breach in April 2020 due to impacts from COVID-19.

Program officials do not anticipate a significant cost increase as a result of the schedule delays.

Transfer to USDA will likely be delayed several months.

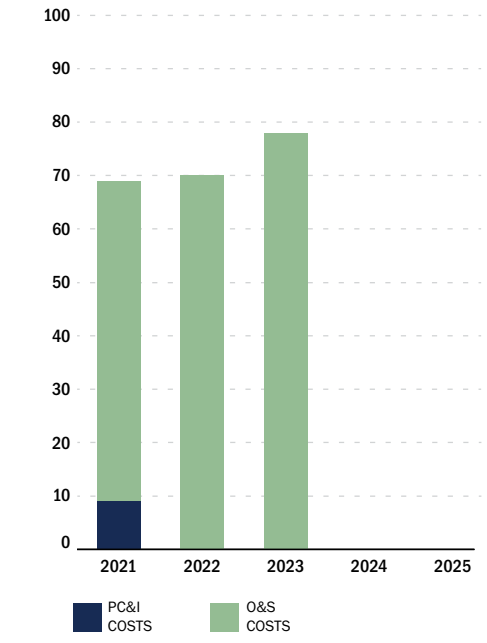
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (07/2014)	1,298	8,341	9,639
Current APB (08/2019)	1,298	0	1,298
Current estimate (03/2017)	1,251	8,250	9,501

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



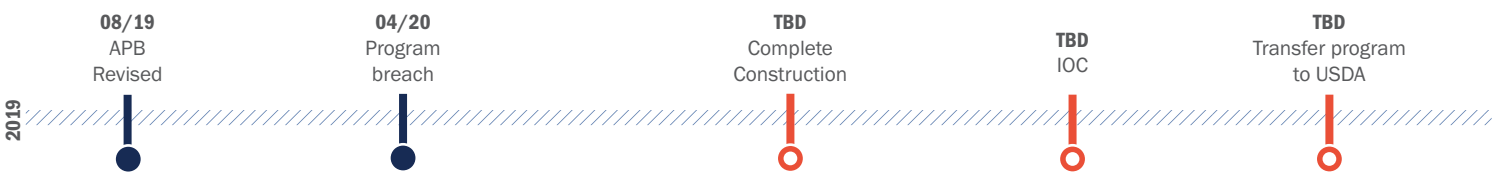
COST AND SCHEDULE

In the Joint Explanatory Statement for the Consolidated Appropriations Act of 2018, congressional conferees specified that DHS would retain responsibility for completing construction of NBAF. DHS is responsible for achieving initial operational capability (IOC), which is facility commissioning. USDA is responsible for achieving full operational capability (FOC), including operational standup of the facility and subsequent operations. DHS leadership approved an addendum to the program's acquisition program baseline (APB) removing the elements that are no longer applicable, including the FOC date and O&S costs. However, the program's life-cycle cost estimate has not been updated to reflect these changes.

In April 2020, NBAF officials declared a schedule breach of the program's final APB milestones—competing construction and facility commissioning—due to labor and material availability challenges as a result of COVID-19 travel restrictions, among other things. DHS leadership did not direct the program to take further action at that time due to the uncertainty associated with the COVID-19 situation. NBAF officials said that NBAF construction is considered a critical government function and, with necessary health and safety precautions in place, officials are able to continue working on site. Officials reported that much of the remaining work that needs to take place as the program approaches construction completion and commissioning must be done in a specific sequence. As a result, delays in the delivery of materials and in validating commissioning requirements had a significant effect on the program's schedule. Prior to the breach, the NBAF program planned to complete construction in December 2020 and commission the facility by May 2021. Officials stated that as the program revises its schedule it will incorporate some additional work which was previously planned for completion after facility commissioning. For example, NBAF officials plan to upgrade some of the freezers in the facility since recent technology provides for more effective storage of pathogens.

NBAF officials do not anticipate a significant cost increase as a result of the schedule breach, and stated that any costs resulting from the schedule breach are expected to remain within the program's APB cost thresholds. The program already received full funding for facility construction efforts through federal appropriations and gift funds from the state of Kansas.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Facility Size	574,000 sq. ft.
Animal Biosafety Level	4
Location	Manhattan, KS
Estimated Cost	$1.25 billion

KEY FINDINGS

Testing of most facility equipment is complete.

Remaining construction efforts include finishing exterior work and landscaping.

NBAF officials said schedule delays have necessitated that USDA staff be detailed back to DHS until construction is completed.

PERFORMANCE AND TESTING

In May 2013, DHS's Director, Office of Test and Evaluation determined he was not responsible for overseeing NBAF because it was a facility, as opposed to a system. NBAF officials previously told GAO that the program instead implemented a commissioning process for the facility to determine if it can meet its sole key performance parameter for laboratory spaces that meet various biosafety standards. NBAF officials stated that DHS and USDA have been in coordination throughout the commissioning process. A third-party commissioning agent has been retained as a subcontractor to the prime construction management contractor, and NBAF officials said that the commissioning plan has been in place since 2012. According to NBAF officials, the commissioning agent worked with the facility design and construction team to develop the commissioning plan, and detailed procedures are in place to install and commission equipment in the facility. The commissioning agent is responsible for monitoring and testing the facility's equipment and building systems during construction to ensure they are properly installed and functioning correctly.

In August 2020, NBAF officials reported that the commissioning agent has completed testing of most facility equipment; however, final testing of the system that will lock down the facility in the case of high winds was still in progress. NBAF officials stated that the testing of this system carries significant risk of damage to the facility, but, as of August 2020, no issues with the system had been identified. According to NBAF officials, USDA staff has been involved in the testing process, which has enabled them to learn how to operate and troubleshoot various systems in the facility. NBAF officials told GAO that, as of August 2020, construction efforts are nearly complete, but remaining activities include landscaping and finishing work on the exterior of the building and in the main lobby, auditorium, and cafeteria.

PROGRAM MANAGEMENT

In June 2019, DHS and USDA signed a memorandum of agreement that established plans to transfer NBAF operational responsibility from DHS to USDA. The memorandum establishes responsibilities related to costs and funding, requirements for establishing NBAF, and considerations for interagency coordination once NBAF is operational, among other things. The memorandum of agreement also states that DHS, in consultation with USDA, will plan for the appropriate timing and necessary mechanism to transfer identified DHS staff to USDA for NBAF activities. According to NBAF officials, DHS and USDA had collaborated to transfer the DHS on-site construction oversight team to USDA to preserve the institutional knowledge of the staff in the future USDA operations of NBAF. These officials also stated that DHS and USDA executed a memorandum of understanding to detail the staff back to DHS until the construction efforts are complete, and that DHS and USDA continue to collaborate on the timing of transfer of DHS and USDA staff from the Plum Island Animal Disease Center to NBAF.

PROGRAM OFFICE COMMENTS

NBAF officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

CHECKPOINT PROPERTY SCREENING SYSTEM (CPSS)

TRANSPORTATION SECURITY ADMINISTRATION (TSA)

The CPSS program is intended to replace aging Advanced Technology (AT) X-ray scanners used by TSA officers to detect threats in passengers' carry-on baggage, including explosives, weapons, and other prohibited items. CPSS will use Computed Tomography (CT) technology for screening, which is expected to meet a higher threat detection standard than AT and detect a wider range of threats. The program will also deploy capabilities designed to improve efficiencies and effectiveness at passenger security checkpoints such as automated tracking of carry-on baggage and networking capabilities

Source: Transportation Security Administration. | GAO-21-175

KEY FINDINGS

CPSS program achieved ADE 2A in September 2019 and established its preliminary baseline.

CPSS program plans to achieve ADE 2B and establish its initial DHS approved APB in December 2020.

To address emerging threats, initial CT units were procured under TSA's AT program.

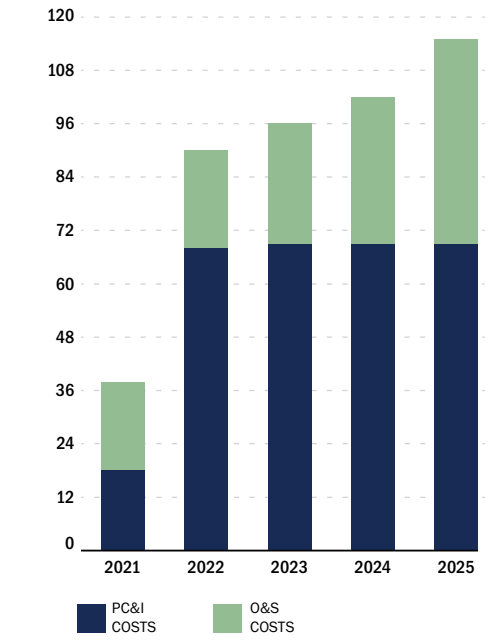
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Preliminary APB (07/2019)	2,053	3,399	5,452
Initial APB	Not yet approved		
Current estimate (08/2019)	1,866	3,090	4,956

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

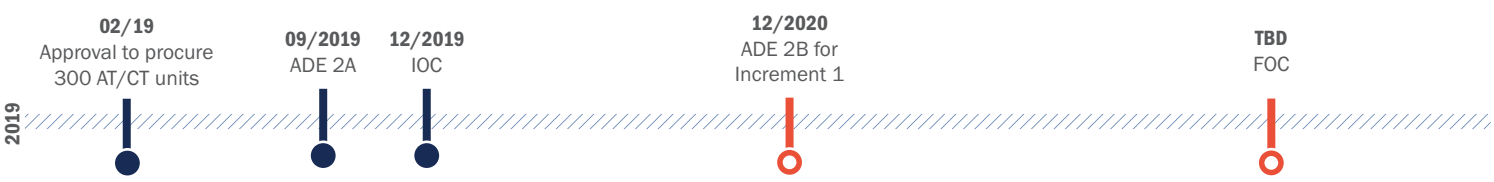
In 2018, DHS leadership approved TSA's request to procure up to 300 CT systems under the AT program, which allowed TSA to address emerging threats while the CPSS program was being established. DHS leadership determined that upon the establishment of the CPSS program at acquisition decision event (ADE) 2A, the AT/CT project—to include the units, funding, and program management—would transfer to the CPSS program and the AT/CT units would be upgraded to incorporate the latest detection algorithms being developed by the CPSS program. As of September 2020, 204 of the 300 AT/CT units have been deployed and TSA plans to complete these deployments by January 2021.

DHS leadership approved the CPSS program's ADE 1 in February 2019 and approved the program's ADE 2A in September 2019. At that time, DHS leadership also authorized TSA to begin the procurement process for CPSS CT units. To inform the decision, the program developed a preliminary acquisition program baseline (APB) that outlines preliminary cost, schedule, and performance goals.

TSA officials said that the program's acquisition strategy was revised following the approval of ADE 2A because TSA determined that multiple configurations of the CPSS units will be needed to address spacing requirements at airports. TSA officials said that as a result, the program plans to procure a mix of base, mid-size and full-size configurations of CPSS units. In May 2020, TSA officials reported that the program's acquisition documentation is being updated to reflect the new acquisition strategy. According to officials, the program plans to establish its initial DHS approved APB and achieve ADE 2B by December 2020. Going forward, officials said TSA plans to use an incremental acquisition approach to deploy CPSS capability based on need and available funding, among other things.

TSA officials said that the CPSS program achieved initial operational capability (IOC) in December 2019 when the first four AT/CT systems were deployed and operational. In its preliminary baseline, the CPSS program planned to deploy a total of 2,218 CPSS units; however, TSA officials stated this quantity may increase when the program's APB is finalized at ADE 2B. These officials also stated that the program does not plan to identify a full operational capability date until ADE 3.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1
Quantity Deployed	204 AT/CT units 0 CPSS units

TEST EVENT

AT/CT operational test and evaluation	09/2018

KEY FINDINGS

204 AT/CT systems have been deployed.

Program has begun vendor qualification testing.

TSA plans to award contracts for CPSS systems in fiscal year 2021.

PERFORMANCE AND TESTING

TSA shares information about the CPSS capabilities it needs with manufacturers through requests for proposal, requests for information, and broad agency announcements. The agency places approved systems from various vendors on a qualified products list (QPL)—a list of technologies that have been tested and certified as meeting requirements by TSA and DHS—and manufacturers are then eligible for a contract award by TSA to purchase and deploy the technology. In response to emerging threats and to make existing systems more efficient, TSA develops, tests, and deploys advanced threat detection algorithms into its deployed systems.

When TSA initiated efforts to procure the AT/CT units for CPSS under the AT program, the AT program's operational requirements document was updated to broaden requirements to focus more generally on capability needs. Further, TSA determined that the AT program's four key performance parameters (KPP) related to safety, availability, throughput, and detection capability were applicable to the AT/CT units. In November 2018, DHS's Director, Office of Test and Evaluation, (DOT&E) assessed the results of certification, qualification of vendors, and operational test and evaluation on the AT/CT systems from four different vendors. DOT&E found that the AT/CT systems from all four vendors did not meet the KPP related to throughput and the systems from two vendors also did not meet the KPP related to availability. Further, DOT&E rated the systems operationally effective and suitable with limitations. Cyber resiliency was not assessed. DOT&E recommended that TSA validate requirements, refine KPPs specific to the AT/CT systems, and develop a plan to address cyber resiliency issues prior to future deployments of networked systems, among other things.

TSA anticipates that the AT/CT units procured under the AT program will be updated with a newer threat detection algorithm by December 2020. TSA officials reported that the advanced detection algorithm will help meet operational needs and decrease passenger contact in the COVID-19 environment and, according to DOT&E officials, the CPSS program will conduct a full cyber resilience evaluation when networked capability is developed in future increments.

As testing is completed and vendors and their CPSS configurations are placed on the QPL, the CPSS program plans to request ADE 3s for incremental procurement and deployment decisions until FOC is met. Specific cost, schedule, and unit procurements will be defined for each ADE 3 and the program's APB will be updated based on the available configuration(s) and funding. TSA officials told GAO that as of June 2020, four out of the five vendors that submitted qualification packages for CPSS units successfully completed initial testing against specific threat samples and will begin qualification testing. In parallel with the vendors moving through the qualification process, TSA officials said that TSA's Requirements and Capabilities Analysis division is continuing research and development efforts to improve hardware and software capabilities to address issues identified during the testing of AT/CT units, such as throughput. The CPSS program plans to award contracts for multiple configurations of the CPSS units in fiscal year 2021, but TSA officials reported that as a result of COVID-19, some awards may be delayed due to delays in qualification testing.

PROGRAM OFFICE COMMENTS

TSA officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

CREDENTIAL AUTHENTICATION TECHNOLOGY (CAT)

TRANSPORTATION SECURITY ADMINISTRATION (TSA)

The CAT system is used to verify and validate passenger travel and identification documents prior to entering secure areas in airports. CAT reads data and security features embedded in identification documentation (ID), verifies security features are correct, and displays authentication results to the operator. The CAT system also verifies the passenger has the appropriate flight reservation to progress through security screening and enter the secure area, among other things.

Source: Idemia. | GAO-21-175

KEY FINDINGS

Program officials said TSA is accelerating deployments in an effort to achieve full operational capability in September 2021—a year earlier than previously planned.

According to officials, program acceleration plans depend on increased funding for fiscal year 2021.

Program officials attribute cost decreases to a reduction in planned enhancement projects, among other things.

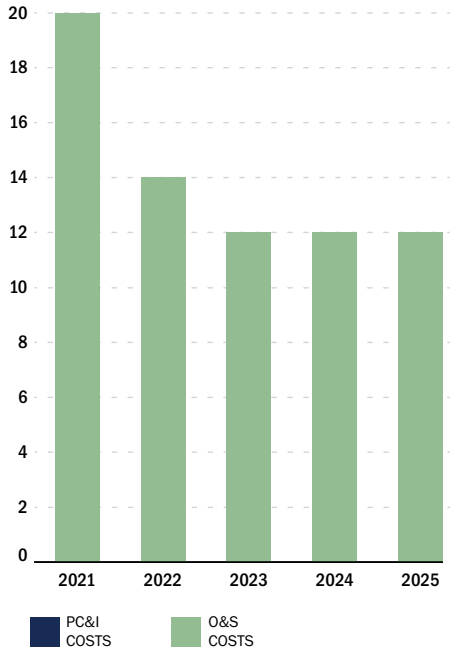
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (12/2018)	0	347	347
Current APB (12/2018)	0	347	347
Current estimate (05/2020)	0	182	182

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



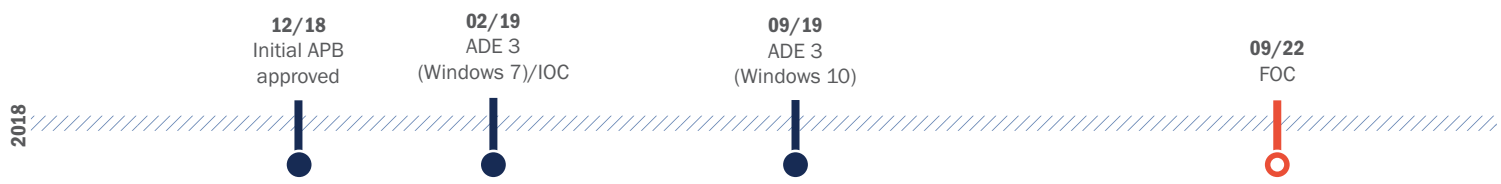
COST AND SCHEDULE

In February 2019, DHS leadership granted the program acquisition decision event (ADE) 3 for procurement and deployment of CAT units and acknowledged the program's initial operational capability (IOC) based on fielded units. Previously, the CAT program was a project in the Passenger Screening Program (PSP), and, in December 2018, DHS leadership approved an acquisition program baseline (APB) for CAT as a stand-alone program as part of the transition to separate individual PSP projects.

TSA accelerated its CAT deployment schedule to enhance passenger screening and increase overall checkpoint security effectiveness. Program officials stated they expect to achieve full operational capability (FOC) in September 2021. While this is a year earlier than the program's current APB threshold date, it is more than 7 years later than had been initially planned under PSP. According to program officials, TSA plans to increase its procurement and deployment from the 505 units deployed as of March 2020 to 1,520 units to achieve FOC in September 2021. In fiscal year 2020, the program received over $4 million more than it requested, which TSA officials said was being used to facilitate the accelerated CAT deployments.

In May 2020, the program updated its life-cycle cost estimate (LCCE), which is within the program's APB cost thresholds. The program's overall O&S costs decreased by about $53 million since its LCCE update in June 2019. TSA officials attributed the O&S cost decrease to a reduction in the number of planned enhancement projects for CAT systems and leveraging contractor warranties to complete maintenance. For example, TSA officials said they no longer plan to integrate a boarding pass scanner shelf—which would allow the checkpoint to remove podiums—into CAT deployments.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	2
FOC Quantity	1,520
Quantity Deployed	581
REAL ID Enforcement Start	10/2021

TEST EVENTS

OT&E	12/2018
Follow-on OT&E (Windows 10)	09/2019
Follow-on OT&E (REAL ID)	09/2021

KEY FINDINGS

CAT completed follow-on testing in September 2019.

Officials said REAL ID capabilities are being tested, despite enforcement delay.

TSA may leverage CAT systems to meet enhanced COVID-19 related capability requirements.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): VARIOUS

DHS leadership approved the program's revised operational requirements document in May 2018, in which the program refined the key performance parameters (KPP) that were previously established under PSP. Following operational testing and evaluation (OT&E) completed in September 2018, DHS's Director, Office of Test and Evaluation (DOT&E) evaluated the test results and determined that the CAT program met all five of its KPPs and found CAT was operationally effective, operationally suitable with limitations, but not operationally cyber resilient. DOT&E recommended that the program work with the vendor to improve the authentication rate of IDs and conduct a study to understand passenger throughput and update throughput requirements accordingly, and conduct follow-on OT&E, among other things. In September 2019, TSA completed follow-on OT&E of the CAT system with the Windows 10 operating system, which included a cyber-vulnerability assessment. The program again met all five of its KPPs, but the OTA reiterated DOT&E's recommendation, noting that the program should continue to work with the vendor to improve authentication rates as well as to address cyber resiliency issues. In addition, TSA officials noted they are working with the user community to conduct throughput studies, which will inform potential future requirements. TSA officials said they plan to provide results to DOT&E by October 2020.

Due to COVID-19 related disruptions, DHS extended the date by which individuals must obtain a REAL ID license by one year to October 2021. However, TSA officials planned to continue testing of CAT REAL ID capability so it is operational by October 2020, as originally planned. TSA officials expect CAT to be TSA's primary identification verification method and will require updates to address changes to state IDs, especially as states adopt new requirements identified in the REAL ID Act of 2005. Among other things, the Act establishes minimum standards for ID issuance, requires certain information and features for each license, and prohibits federal agencies from accepting IDs from states not meeting these standards unless the Secretary of Homeland Security has granted the issuing state an extension of time to meet requirements. TSA officials said the program plans to conduct REAL ID specific follow-on operational testing prior to the implementation date in October 2021.

PROGRAM MANAGEMENT

In spring 2020, the TSA Administrator—in correspondence with Congress—noted that TSA is exploring ways to both leverage and revise existing CAT efforts to reduce exposure to passengers and Transportation Security Officers during the COVID-19 pandemic. For example, TSA officials stated that many airports are leveraging baseline CAT units and making adjustments to monitors so passengers present their own ID into a CAT device. The Administrator further noted that TSA is focusing on rapidly producing and deploying a touchless CAT version. However, in May 2020, CAT program officials noted that they have not received funding to implement these potential technology upgrades, but they are working with TSA's Requirements and Capabilities Analysis division to help inform potential solutions.

DHS is also researching potential CAT capability enhancements to meet emerging identity management needs. According to TSA officials, CAT is a critical component for TSA's efforts to enhance biometrics capabilities at TSA checkpoints for identity verification. To help achieve this, cameras will be integrated with CAT units to match facial images against the images on IDs. The biometric technology being piloted is not part of the CAT program at this time, but program officials hope to conduct OT&E on the new capability in fiscal year 2021.

PROGRAM OFFICE COMMENTS

TSA officials stated that the FOC date for CAT was delayed, in part, for reasons outside the program's control. TSA officials also provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

ELECTRONIC BAGGAGE SCREENING PROGRAM (EBSP)

TRANSPORTATION SECURITY ADMINISTRATION (TSA)

Established in response to the terrorist attacks of September 11, 2001, EBSP tests, procures, and deploys transportation security equipment—such as explosives, trace detectors, and explosives detection systems—across 440 U.S. airports to ensure 100 percent of checked baggage is screened for explosives. EBSP is primarily focused on delivering new systems with enhanced screening capabilities and developing software upgrades for existing systems.

Source: Transportation Security Administration. | GAO-21-175

KEY FINDINGS

Program re-baselined in October 2019—2 months after breaching O&S costs as a result of a change in procurement strategy.

Due to COVID-19 and the resulting reduction in travel and decrease in passenger fees collected, the program anticipates funding challenges.

Program achieved IOC in February 2018 for explosives detection systems with an advanced threat detection algorithm.

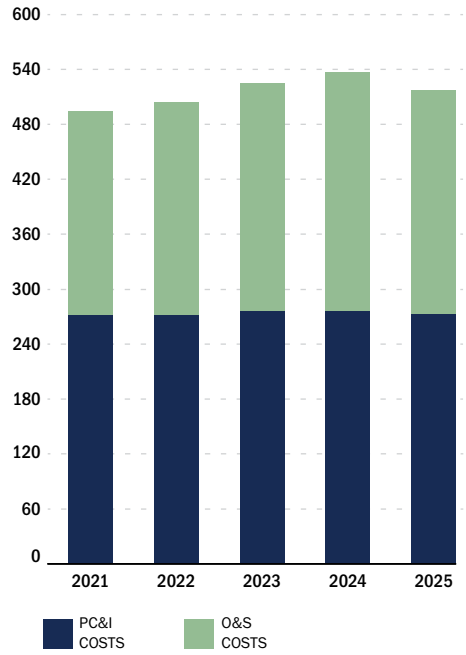
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (08/2012)	14,465	6,733	21,198
Current APB (10/2019)	13,657	6,241	19,898
Current estimate (10/2019)	11,867	5,427	17,303

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

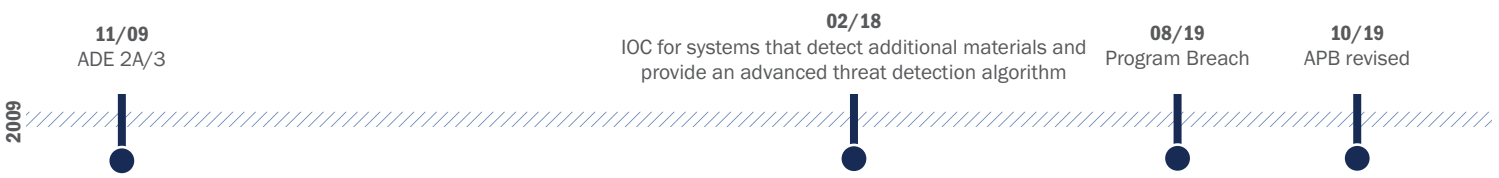
In October 2019, DHS leadership approved the program's revised acquisition program baseline (APB) and subsequently removed the program from breach status. The program declared a cost breach in August 2019 as a result of increased O&S costs, which exceeded the program's O&S cost threshold.

The program previously revised its APB in May 2016 to account for budget reductions and to implement the program's strategy to prioritize funding to extend the life of screening technologies, among other things. The program implemented changes through ongoing maintenance and system upgrades. DHS officials reported that this approach improved security effectiveness and operational efficiencies at a lower cost than replacing legacy systems with new systems. However, this approach increased the number of systems that are out-of-warranty and increased the maintenance needed to sustain these systems. In addition, the new approach introduced a third party that will coordinate activities across EBSP's various vendors. As a result of these changes, the program's total life-cycle cost threshold in its October 2019 revised APB increased by nearly $1 billion from its May 2016 APB.

The program anticipates an affordability gap of approximately $4 million between fiscal years 2021-2025. Further, due to COVID-19, the program may experience funding challenges because of the decline in passenger travel and fees collected. Specifically, the program receives up to $250 million annually from the Aviation Security Capital Fund, which is funded by the Aviation Passenger Security Fees. This funding is used to support airport security capital improvement projects.

TSA officials reported that they achieved initial operational capability (IOC) of explosives detections systems with an advanced threat detection algorithm—the program's final APB milestone—in February 2018. TSA leadership approved the program to then deploy detection algorithm updates to fielded systems. Specifically, these updates will allow for the improved screening of explosives, which are intended to help TSA officers distinguish benign objects from potential threats as well as reduce the false alarm rate.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Quantity Deployed (EDS)	1,634
Quantity Deployed (ETD)	2,638

TEST EVENTS

Follow-on OT&E of a reduced-size standalone system	01/2019
OT&E of a medium speed system	05/2017
OT&E of a reduced-size stand-alone system	03/2017

KEY FINDINGS

Program is working to address cybersecurity requirements.

Program is pursuing a new procurement strategy for two types of detection systems.

Program continues to reimburse airports as they are modified to accommodate baggage screening systems.

PROGRAM PERFORMANCE, TESTING AND EXECUTION

OPERATIONAL TEST AGENT (OTA): TSA OFFICE OF SECURITY CAPABILITIES' TEST AND EVALUATION DIVISION

TSA shares information about the EBSP capabilities it needs with manufacturers through requests for proposal, requests for information, and broad agency announcements. The agency places approved systems from various vendors on a qualified products list—a list of technologies that have been tested and certified as meeting requirements by TSA and DHS—and manufacturers are eligible for a contract award by TSA to purchase and deploy the technology. In response to emerging threats and to make existing systems more efficient, TSA develops, tests, and deploys advanced threat detection algorithms into its deployed systems.

As of October 2020, TSA had deployed about 1,630 explosives detection systems, which use x-rays with computed tomography to screen checked baggage. In addition, TSA deployed approximately 2,640 explosives trace detection systems to detect chemical attributes of explosive residue on checked baggage and passengers. These systems varied in size and speed. According to TSA officials, the program made progress in procuring and deploying new screening systems and updating detection algorithms, but COVID-19 related safety precautions resulted in delays in the deployments of some screening upgrades.

According to TSA officials, EBSP has demonstrated that all deployed systems met the program's key performance parameters (KPP), including automated threat detection, throughput, and operational availability. Since 2011, DHS's Director, Office of Test and Evaluation (DOT&E) has assessed the operational test and evaluation (OT&E) of 11 EBSP systems and determined that six are effective and suitable. In May 2020, TSA officials reported that the program is working to manage cyber compliance under the Federal Information Technology Acquisition Reform Act and working to obtain its cybersecurity authority to operate some equipment. Program officials said they expect to achieve the authority to operate by May 2021, and they are coordinating with DOT&E as they assess cyber resiliency requirements.

As of July 2020, the program was updating its operational requirements document and test and evaluation master plan to reflect its new procurement strategy. Under this strategy, TSA transitions from speed and size designators to two functional system categories: (1) inline systems that integrate with a baggage handling system and are linked through a network; and (2) stand-alone systems that may be integrated with a baggage handling system but are not linked to a network. This strategy updates functional requirements focused on improving security effectiveness through incremental capability enhancements. The first solicitation window—for inline systems and stand-alone systems—ended in October 2019. The second window for all systems started in March 2020 and is expected to end by January 2021. Systems that successfully complete qualification and operational testing will be added to TSA's qualified products lists.

TSA will continue to reimburse commercial airports, as planned under its grant authority, for the government's share of costs to make modifications to commercial airports to accommodate checked baggage screening systems. TSA obligated over $980 million from fiscal years 2012 through 2019 to reimburse airports for the allowable design and construction costs associate with installing, updating, or replacing screening technology. Individual agreements with airports generally range from $50,000 to $150 million, subject to availability of funds, and the anticipated period of performance can range from 6 months to 3 years, depending on the size and complexity of the project.

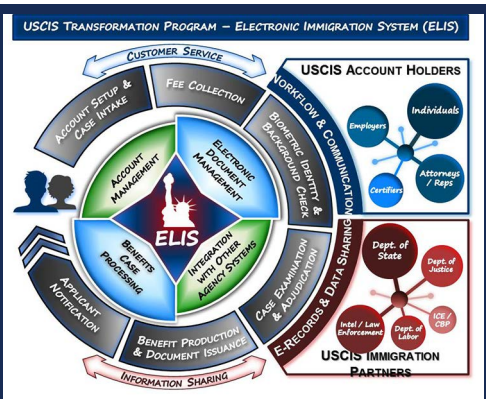
PROGRAM OFFICE COMMENTS

TSA officials reviewed a draft of this assessment and provided no comments.

TRANSFORMATION

U.S. CITIZENSHIP AND IMMIGRATION SERVICES (USCIS)

The Transformation program was established in 2006 to transition USCIS from a fragmented, paper-based filing environment to a consolidated, paperless environment for electronically processing immigration and citizenship applications. The program is delivering system capability through releases that either deploy electronic, web-based application forms or improve system functionality based on feedback from end users at USCIS field offices throughout the country.



Source: U.S. Citizenship and Immigration Services. | GAO-21-175

KEY FINDINGS

Transformation achieved ADE 3 and FOC in March 2020, and the final legacy system was decommissioned in September 2020.

The program's life-cycle cost estimate decreased by $179 million from 2018 to 2020 due to reduced O&S costs.

Officials said decline in fee collection due to COVID-19 may lead to funding gaps.

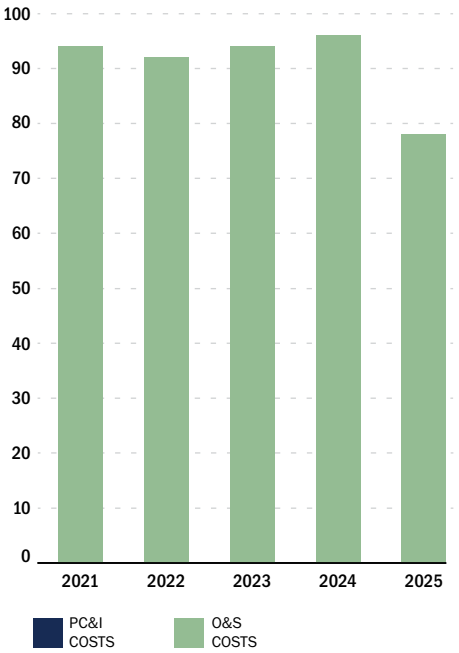
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (07/2011)	1,356	718	2,074
Current APB (03/2020)	1,434	2,283	3,717
Current estimate (03/2020)	1,186	1,866	3,052

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In March 2020, DHS leadership granted approval of the Transformation program's acquisition decision event (ADE) 3 and acknowledged the program's achievement of full operational capability (FOC). Specifically, the DHS Director, Office of Test and Evaluation (DOT&E) determined that the Transformation program demonstrated that USCIS's application processing information system—Electronic Immigration System (ELIS)—provided the core capabilities and features needed to satisfy the operational requirements. ELIS is intended to replace 12 of USCIS's legacy systems, and, according to USCIS officials, the final legacy system was decommissioned in September 2020. USCIS plans to continue developing and deploying ELIS enhancements through adaptive maintenance to align with future immigration form or policy changes. In addition, USCIS officials stated that the program plans to add more capabilities, such as conducting virtual interviews and completing applications remotely, which became necessary during the COVID-19 situation.

In March 2020, the program updated its acquisition program baseline (APB) to inform the ADE 3 decision. According to officials, no changes were made to the program's cost and schedule goals because the program was meeting the goals established in its prior APB. The program previously revised its APB in June 2018 when DHS leadership removed the program from breach status—lifting a strategic pause that had limited new program development for 18 months. The program experienced a schedule breach in September 2016 when it failed to upgrade the ELIS system to include applications for naturalization.

The program's life-cycle cost estimate (LCCE) was updated in March 2020 and decreased by approximately $179 million from its prior LCCE due, in part, to a reduction in the number of contractor staff working in offsite locations. USCIS uses revenue from fees to fund the Transformation program, but USCIS officials reported that the program is anticipating future funding gaps as a result of a decline in fee collection due to COVID-19.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1
Requirement Derived From	DHS identified capability gap, congressional and executive priority

TEST EVENTS

OT&E	12/2019

KEY FINDINGS

DOT&E found the program operationally suitable with limitations.

The program will continue cyber resiliency threat assessments.

Reduced fee collection due to COVID-19 will likely lead to staffing shortages.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): PPT SOLUTIONS INC.

In September 2019, the Transformation program requested DHS leadership approval to update one of the program's six key performance parameters (KPP). Specifically, USCIS officials requested an administrative change to the program's operational requirements document (ORD) and APB to revise its KPP related to lead time. The KPP was revised because it was overly specific and limited the ability of operational testers to determine the best measurement of system performance. DHS leadership agreed to the administrative changes and approved the updates to the KPP in the ORD and APB in February and March 2020, respectively.

In March 2020, DOT&E assessed the test results of operational test and evaluation (OT&E) completed on ELIS and found that it (1) met all six of its KPPs; (2) is operationally effective with limitations due to issues with interfaces critical for case processing; (3) is operationally suitable with limitations due to training and workload issues; and (4) is operationally cyber resilient with limitations due, in part, to an identified vulnerability. DOT&E recommended that USCIS work with partners to improve the reliability of critical interfaces, continue to conduct periodic threat-based cyber resiliency testing, and address training deficiencies. In July 2020, USCIS officials stated that the program coordinates closely with interface partners to quickly implement solutions for problems that arise between their systems and ELIS. In addition, USCIS officials reported plans to conduct periodic cyber resiliency testing at the component level because, as a result of the interconnections between USCIS systems and ELIS, USCIS's security affects the operational resiliency of ELIS. Further, USCIS officials stated that the Transformation program office is not responsible for addressing USCIS's training needs; however, program officials are coordinating with the human capital office and providing feedback on training as revisions to curriculum are made. These officials also stated the program does not plan to conduct any follow-on OT&E because the OTA determined the program satisfied all mission needs and operational requirements.

PROGRAM MANAGEMENT

In September 2016, the Transformation program breached its schedule baseline when persistent system deficiencies forced the program to revert 84,000 monthly applications for naturalization forms from an upgraded application information system to a legacy platform. In response, USCIS dismantled the program office and repositioned Transformation under the USCIS Office of Information Technology so the program could leverage additional engineering expertise.

In June 2020, USCIS officials stated that as a result of COVID-19 and the policies regarding the pandemic, applications for immigration benefits such as citizenship and work visas have decreased significantly. Those application reductions affect the funding of USCIS since, according to USCIS officials, USCIS is funded mainly through those application fees. As a result, program officials stated that USCIS is unable to hire new employees through at least the remainder of the fiscal year, which will lead to staffing shortages, hiring gaps for key positions, increasing workloads for employees, and possible schedule delays if positions remain unfilled. Program officials stated that they will adapt with their current staffing situation; however, they are often constrained by the scope of contracts when using federal and contractor resources for certain tasks.

PROGRAM OFFICE COMMENTS

USCIS officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

270' MEDIUM ENDURANCE CUTTER (MEC) SERVICE LIFE EXTENSION PROGRAM (SLEP)

U.S. COAST GUARD

The Coast Guard's MEC fleet is used for surveillance, general law enforcement, and other missions. The cutters have reached or are approaching the end of their 30-year design service life, and the designated replacement for the MEC is the Offshore Patrol Cutter (OPC). The 270' MEC SLEP is intended to help close the operational capability gap until the OPCs begin operational service in calendar year 2025 and a sufficient number of OPCs are delivered to fill the operational gap.

Source: United States Coast Guard, Petty Officer 2nd Class Lisa Ferdinando. | GAO-21-175

KEY FINDINGS

DHS leadership granted the program acquisition decision event 2A/B approval in July 2019.

The program estimates the service life of the cutter that undergo the SLEP will be extended by up to 10 years.

The first MEC to undergo the SLEP is planned for delivery to the fleet in 2024.

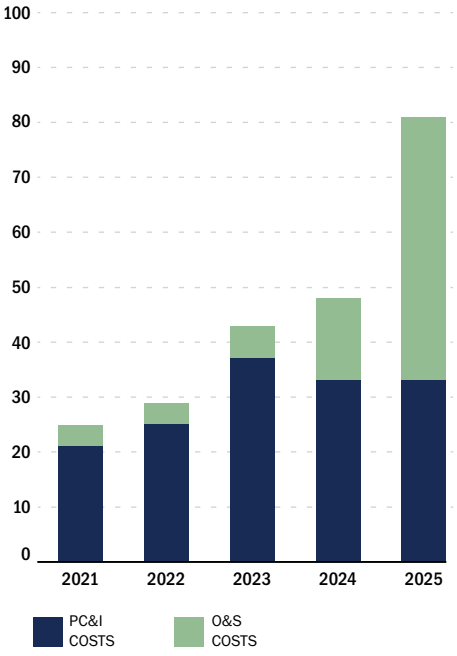
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (06/2019)	269	1,868	2,137
Current APB (06/2019)	269	1,868	2,137
Current estimate (06/2020)	235	1,625	1,859

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In April 2018, DHS leadership approved the program's acquisition decision event (ADE) 1 and acknowledged the Coast Guard's need to extend the service life of a portion of the 270' MEC fleet while waiting for OPCs to begin operational service. DHS leadership subsequently approved the program's initial acquisition program baseline (APB) and granted the program approval of a combined ADE 2A and 2B in July 2019. The program's initial APB outlines the cost, schedule, and performance goals for the SLEP of six of the 13 270' MECs in the Coast Guard's fleet. Coast Guard officials estimate that the SLEP will extend the service life of the cutters by up to 10 years. The SLEP will not introduce new capabilities but is a targeted system replacement to address reliability, supportability, obsolescence, and interoperability.

While the Coast Guard has initiated the service life extension for at least six of the 270' MECs, the program acknowledged there is a high risk that the 270' MECs could experience system failures faster than they can be replaced or repaired. The Coast Guard plans to mitigate this risk by adjusting the selection and order of cutters that will undergo the SLEP.

The program plans to achieve ADE 2C—approval of low-rate initial production—by September 2023. At that time, the first cutter is expected to enter the SLEP process with planned availability to the fleet in 2024. Full operational capability (FOC) of the six MECs is anticipated in December 2029.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Total Number of Cutters	6
Related Program	Offshore Patrol Cutter

TEST EVENTS

Initial operational testing	Planned for fiscal year 2025

KEY FINDINGS

Coast Guard officials acknowledge that the 270' MECs are at high risk of system failure before planned system replacements.

The MEC SLEP includes the acquisition of the main diesel engines and electrical system, among other things.

Coast Guard officials said that contracts provide flexibilities for completing upgrades on additional cutters, if necessary.

PROGRAM EXECUTION

The MEC SLEP includes the acquisition of two major systems: the main diesel engines and the electrical system, which includes the ship-service and emergency generators. The SLEP will also include other upgrades, such as a structural refurbishment to the stern pipe and bearing, as well as updating selected weapons systems. According to Coast Guard officials, many of the MECs' current systems are still available from the original equipment manufacturers, and, as a result, the program plans to use commercial off-the-shelf and government off-the-shelf solutions for the SLEP.

Upon approval of ADE 2A and 2B in July 2019, DHS leadership also approved the procurement of long-lead time materials, the use of two electrical system prototypes, and a low-rate initial production quantity of three cutters. According to Coast Guard officials, the program plans to replace the main diesel engines on the first two cutters with new engines and install re-manufactured engines in the remaining four cutters. Specifically, officials said that the first two cutters will receive new engines so the contractor can then begin the re-manufacturing process of existing MEC main diesel engines for installation in subsequent cutters. According to officials, the low-rate initial production quantity of three cutters will allow the program to assess a cutter with a re-manufactured engine before the program's planned ADE 3. The Coast Guard awarded a contract for the electrical system in May 2020. To mitigate risk related to replacing the electrical system on the cutters, DHS leadership authorized the program to use two electrical system prototypes. The two cutters receiving the electrical system prototypes will be unavailable for approximately 8 months while the prototypes are integrated.

The Coast Guard plans to conduct the SLEP at the Coast Guard Yard in Baltimore, Maryland, which, according to the Coast Guard, will rely primarily on the government workforce and leverage experience from previous SLEPs for other Coast Guard assets, and extensive work maintaining and renovating 270' MECs since delivery beginning in 1984. To address the uncertainty of the OPC delivery schedule, Coast Guard officials say the SLEP contracts provide for upgrades to up to all 13 270' MECs, if necessary. According to Coast Guard officials, they will not need to make a decision to expand the MEC SLEP of additional cutters until fiscal year 2024. According to the Coast Guard, each additional MEC added to the SLEP program would cost approximately $35 million per cutter in PC&I costs.

The program plans to demonstrate its six key performance parameters (KPP) through a series of test events. The program's KPPs are related to speed, endurance, range, boat and helicopter operations, and interoperability with systems from various government and non-government partners. In May 2019, DHS's Director, Office of Test and Evaluation approved the program's test and evaluation master plan (TEMP). The TEMP calls for initial operational test and evaluation to begin in fiscal year 2025.

According to officials, the program planned to conduct a cyber tabletop exercise in fiscal year 2020, but the scheduling of the event has been delayed as a result of COVID-19 and social distancing requirements. Coast Guard officials do not anticipate that these delays will affect the program's schedule milestones.

PROGRAM OFFICE COMMENTS

Coast Guard officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

FAST RESPONSE CUTTER (FRC)
U.S. COAST GUARD

The Coast Guard uses the FRC to conduct search and rescue, migrant and drug interdiction, and other law enforcement missions. The FRC carries one cutter boat on board and is able to conduct operations in moderate sea conditions. The FRC replaces the Coast Guard's Island Class patrol boat and provides improved fuel capacity, surveillance, and communications interoperability with other DHS and Department of Defense assets.

Source: U.S. Coast Guard. | GAO-21-175

KEY FINDINGS

Program is revising baseline to include six additional FRCs, but there are affordability concerns.

Officials stated the phase 2 contract was modified to update the ceiling of cutters from 26 to 32, allowing six more cutters to be procured.

Funding for the last four cutters is not appropriated.

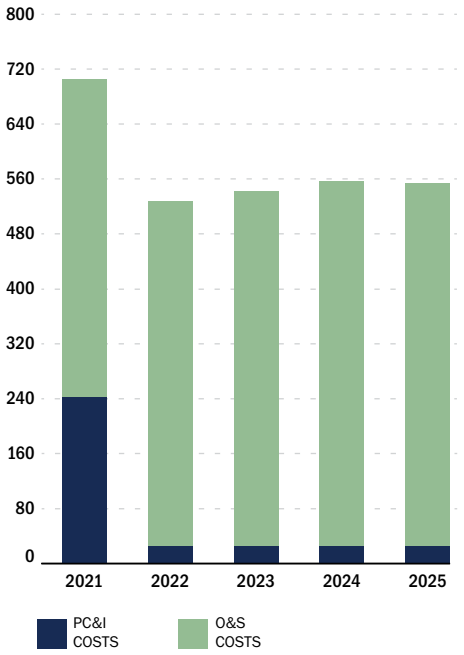
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (08/2009)	4,243	11,391	15,634
Current APB (10/2012)	4,243	11,391	15,634
Current estimate (06/2020)	3,670	10,998	14,669

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



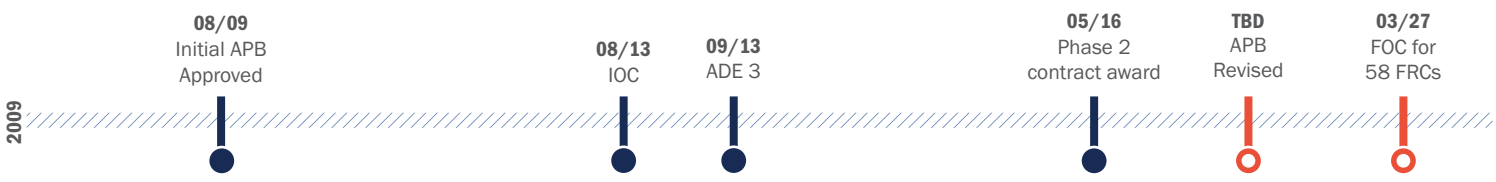
COST AND SCHEDULE

Coast Guard officials told GAO the program is revising its acquisition program baseline (APB) to reflect an increase of up to six FRCs, which will replace six cutters currently operating in the Middle East. The Coast Guard previously planned to acquire 58 FRCs but officials stated they recently modified the construction contract to account for the planned increase to 64 FRCs. As of October 2020, 41 FRCs had been delivered and another 19 were on contract. The program received $260 million in funding in fiscal year 2020—allowing for the procurement of an additional four FRCs in that fiscal year. However, funding for the last four additional FRCs has not been appropriated. To inform the budget process, the program updated its life-cycle cost estimate in June 2020 to include the cost of the additional six cutters.

Coast Guard officials stated that the contractor—Bollinger Shipyards LLC—is meeting the program's current delivery schedule, and the program is expected to achieve full operational capability (FOC) for the original 58 cutters by March 2027, as planned. However, the program's FOC date will likely be extended to account for the delivery of the additional cutters in the revised APB.

The program's initial operational capability (IOC) date previously slipped after a bid protest related to the program's initial contract award, known as phase 1, occurred and also due to the need for structural modifications. Coast Guard officials attributed a subsequent 5-year slip in the program's FOC date to a decrease in annual procurement quantities under the phase 1 contract. In May 2014, the Coast Guard determined that it would procure only 32 of the 58 FRCs through this contract and initiated efforts to conduct full and open competition for the remaining 26 vessels—known as phase 2. In May 2016, the Coast Guard awarded the phase 2 contract to Bollinger Shipyards LLC for the remaining 26 FRCs. Under the phase 2 contract, the Coast Guard can procure four to six FRCs per option period. For fiscal year 2019, the Coast Guard reported that it exercised an option for six FRCs. According to Coast Guard officials, the phase 2 contract was modified in September 2020 to increase the total quantity allowed under the current contract from 26 to 32 cutters to account for the additional FRCs.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Current APB FOC Quantity	58
Quantity Delivered	41 Cutters
Prime Contractor	Bollinger Shipyards

TEST EVENTS

Follow-on OT&E	07/2016

KEY FINDINGS

Resolutions of the last two follow-on OT&E deficiencies are delayed because of COVID-19.

Warranty is covering ongoing hull and water pump shaft retrofits.

Delivery of cutters to Pacific and Middle East during COVID-19 is challenging but being mitigated.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): U.S. NAVY OPERATIONAL TEST AND EVALUATION FORCE

In February 2017, DHS's Director, Office of Test and Evaluation assessed the results from the program's July 2016 follow-on operational test and evaluation (OT&E) and determined that the program met its six key performance parameters, and that the FRC was operationally effective and suitable. During follow-on OT&E, the OTA found that several deficiencies from the program's initial OT&E had been corrected. For example, the OTA closed a severe deficiency related to the engines based on modifications to the FRC's main diesel engines. However, five major deficiencies remained. In July 2020, Coast Guard officials reported that the program addressed all but two deficiencies—mast light reduction and the bridge alarm. These officials explained that as a result of the COVID-19 situation, the program has experienced some delays in resolving these two issues, but anticipate resolution by June 2021. Coast Guard officials stated the program conducted Command Cyber Readiness Inspections (CCRI), which are Department of Defense cybersecurity audits of computer systems on defense networks, and those inspections revealed there were some issues pertaining to operating systems. However, final testing in September 2019 demonstrated that issues resulting from the CCRI had been addressed. In addition, Coast Guard officials stated the machinery control monitoring system functioned as expected, but in order to meet current cybersecurity requirements the operating system had to be changed. The Coast Guard is currently retrofitting the fleet when there is cutter and personnel availability. Coast Guard officials stated no other cyber testing events are planned.

PROGRAM MANAGEMENT

The Coast Guard continues to work with the shipbuilder to address issues covered by the contract's warranty clauses. For example, in the fall of 2017, Coast Guard officials reported identifying a latent defect in the hull that would affect the FRC's ability to achieve its intended 25-year structural fatigue life. To address cracks found in the interior steel structure of two FRCs, Coast Guard officials stated that the contractor developed corrective actions—ranging in complexity from adding bracket supports to removing and replacing large sections of steel. These defects are being addressed during production and retrofitted on completed FRCs during their regular maintenance periods. Further, Coast Guard officials stated that a new water pump shaft was developed and tested to address challenges with pump failures, which made an FRC inoperable until it was repaired. Officials said that the new water pump shafts will be retrofitted to all engines during regular maintenance periods at the manufacturer's cost, and currently they are being installed on four cutters. Further, officials stated there will be no cost or schedule impact on the program. Lastly, Coast Guard was having trouble identifying funds needed for spare parts including engines, propellers, and rudders. In July 2020, Coast Guard officials stated they were expecting to award a new fleet-wide contract for spares by the end of this fiscal year. As of October 2020, Coast Guard officials reported the FRC contract's warranty clauses have resulted in $159 million in cost avoidance.

As a result of the COVID-19 situation, Coast Guard officials stated in October 2020 that they experienced some challenges to deliver the cutters to their homeports in the Pacific and Middle East regions, but the first cutter arrived on schedule to that region in September 2020. Further, officials stated they do not anticipate any issues with future deliveries to these locations. To mitigate these challenges, Coast Guard officials stated that they are consistently engaging with stakeholders and are conducting advance homeport visits to ensure logistics support is available for the FRCs.

PROGRAM OFFICE COMMENTS

Coast Guard officials stated the FRC program continues to meet all cost, schedule, and performance requirements associated with the expanded program of record. While the program has experienced additional schedule challenges due to the evolving COVID-19 personnel movement restrictions, officials added that the Coast Guard recently delivered the first FRC to Guam on schedule. Coast Guard officials also provided technical comments on a draft assessment, which GAO incorporated as appropriate.

H-65 CONVERSION/SUSTAINMENT PROGRAM (H-65)

U.S. COAST GUARD

The H-65 aircraft is a short-range helicopter that the Coast Guard uses to fulfill its missions, including search and rescue, ports and waterways security, marine safety, and defense readiness. The H-65 acquisition program consists of six phases or discrete segments that incrementally modernize the H-65 aircraft fleet. The program is currently focused on a service life extension program (SLEP) and upgrades to the automatic flight control system (AFCS) and avionics.

Source: U.S. Coast Guard. | GAO-21-175

KEY FINDINGS

Program achieved ADE 3 and is proceeding with full rate production of the SLEP and planned upgrades.

Officials reported COVID-19 related schedule delays, but remain on track to achieve FOC in September 2024.

Coast Guard plans to operate the H-65 aircraft until 2039 in order to prioritize funding for the Offshore Patrol Cutter.

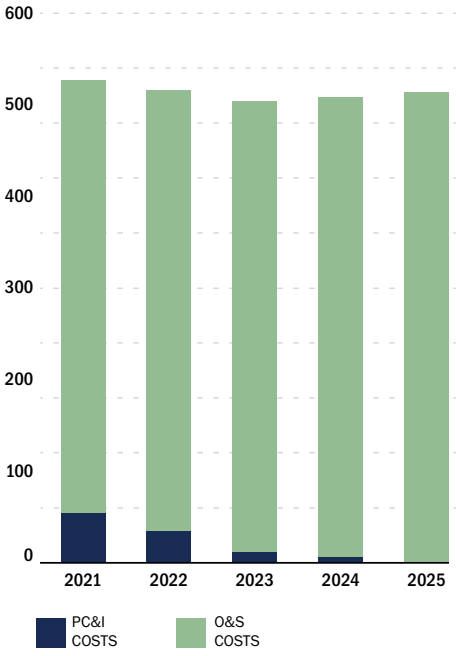
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (02/2011)	1,150	7,033	8,184
Current APB (03/2018)	1,070	12,590	13,660
Current estimate (06/2020)	996	11,416	12,412

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

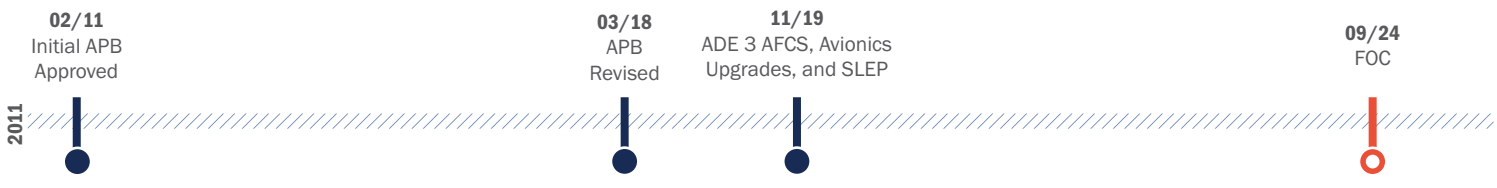
In November 2019, DHS leadership granted approval of the program's acquisition decision event (ADE) 3 and authorized the program to proceed with full rate production of the SLEP and the AFCS and avionics upgrades.

DHS leadership approved the program's current acquisition program baseline (APB) in March 2018 after the program breached its goals as a result of underestimating the technical effort necessary to meet requirements. As the program revised its baseline, it restructured the program's schedule to synchronize the SLEP with the AFCS and avionics upgrades. As a result, the SLEP and upgrades to AFCS and avionics will occur during the same scheduled maintenance period for each aircraft. This structure allows the Coast Guard to leverage accessibility of components the program intends to replace as part of the SLEP while the aircraft is being assembled to accommodate the AFCS and avionics upgrades. As a result, Coast Guard officials reported that the program will avoid some labor costs and reduce the risk of damaging AFCS and avionics components, which would need to be removed during the SLEP.

According to Coast Guard officials, the program is on track to meet its cost and schedule goals. In June 2020, the program updated its life-cycle cost estimate to inform the budget process, which is within the program's APB thresholds. In June 2020, Coast Guard officials told GAO that the program is on track to meet its September 2024 full operational capability (FOC) date despite experiencing schedule delays as a result of COVID-19. Coast Guard officials said that as of September 2020, nine aircraft had received the SLEP and avionics upgrades.

According to officials, the Coast Guard plans to operate the H-65 aircraft until 2039 so that it can prioritize funding for the Offshore Patrol Cutter. The Coast Guard also plans to align its next helicopter acquisition effort with the Department of Defense's future vertical lift acquisition plans.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Total Aircraft	98
Total Number of Aircraft with Upgrades Complete	9 Cutters

TEST EVENTS

Follow-on OT&E	Fiscal Year 2022
Cyber Tabletop Exercise	05/2019
Initial OT&E	04/2019

KEY FINDINGS

Coast Guard officials reported that completed aircraft are meeting all 18 of the program's KPPs.

Program is addressing recommendations related to cyber resiliency.

SLEP is expected to extend the service life of each aircraft by 10,000 flight hours.

PROGRAM PERFORMANCE AND EXECUTION

OPERATIONAL TEST AGENT (OTA): U.S. NAVY OPERATIONAL TEST AND EVALUATION FORCE

The Coast Guard upgrades the aircraft at the Aviation Logistics Center in North Carolina, where engineers and technical authorities install, test, and evaluate the new equipment. In June 2020, Coast Guard officials stated that the completed aircraft are meeting all 18 of the program's key performance parameters (KPP).

In April 2019, the program's OTA completed initial operational test and evaluation (OT&E) on two aircraft with the new AFCS and avionics. DHS's Director, Office of Test and Evaluation (DOT&E) subsequently assessed the test results and found (1) the aircraft to be operationally effective and suitable with limitations; (2) the aircraft met 16 of its 18 KPPs; and (3) the aircraft did not meet two KPPs related to availability and supportability because the test facility maintenance cycle was not representative of an operational environment. Coast Guard officials stated that the program met its KPPs for availability and supportability when officials from the Coast Guard's Office of Aeronautical Engineering repeated the assessment using fiscal year 2019 data, which Coast Guard officials said represented an operational environment. The program plans to conduct follow-on OT&E in fiscal year 2022.

The Coast Guard awarded contracts to Rockwell Collins—the original equipment manufacturer of the legacy AFCS and avionics—for continued development of the AFCS and avionics upgrades in July 2016 and March 2017, respectively. Coast Guard officials explained the upgrades began in October 2018 and will continue until all operational and support aircraft have been modified, and delivery of the avionics to the fleet began in July 2020.

Coast Guard officials stated cyber resilience was not included in initial OT&E because it was not a consideration at the time the testing was planned, and the OTA needed more time to adequately plan for the testing. In May 2019, the program completed a cyber tabletop exercise in coordination with stakeholders from across the Coast Guard, DHS, and the Department of Defense. Coast Guard officials stated that they are taking steps to address the recommendations, but DOT&E determined that the program does not need to undergo cyber resiliency testing unless changes are made to program requirements. According to Coast Guard officials, the nature of the discussions related to cyber resiliency testing are classified.

The H-65 fleet is projected to begin reaching the end of its service life in 2021 as airframes start reaching 20,000 flight hours. The SLEP is expected to extend the flight hour service life of each aircraft by 10,000 flight hours by replacing flight-hour limited components. According to Coast Guard officials, there is risk involved with extending the aircrafts' service life beyond 20,000 flight hours since it has never been done by other agencies that operate this type of helicopter. Coast Guard officials stated that the aircraft manufacturer, Airbus, assisted the Coast Guard's chief aeronautical engineer in identifying parts that need replacement. Since 2004, the H-65 program has made several capability and sustainment upgrades to the aircraft including improved navigation and radar systems and improved AFCS reliability.

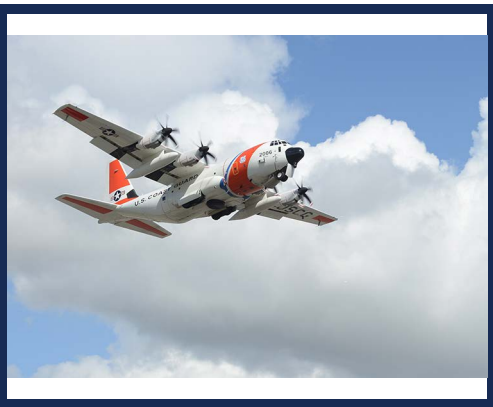
PROGRAM OFFICE COMMENTS

Coast Guard officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

LONG RANGE SURVEILLANCE AIRCRAFT (HC-130H/J)

U.S. COAST GUARD

The Coast Guard uses HC-130H and HC-130J aircraft to conduct search and rescue missions, transport cargo and personnel, support law enforcement, and execute other operations. Both aircraft are quad-engine propeller-driven platforms. The HC-130J is a modernized version of the HC-130H, which has advanced engines, propellers, and equipment that provide enhanced speed, altitude, range, and surveillance capabilities.



Source: U.S. Coast Guard. | GAO-21-175

KEY FINDINGS

Program revised its baseline in March 2020 to reflect a change to an all HC-130J fleet.

The program's O&S cost threshold increased by $2.5 billion primarily as a result of extending the service life of the HC-130J.

The program's full operational capability date slipped 6 years to September 2033.

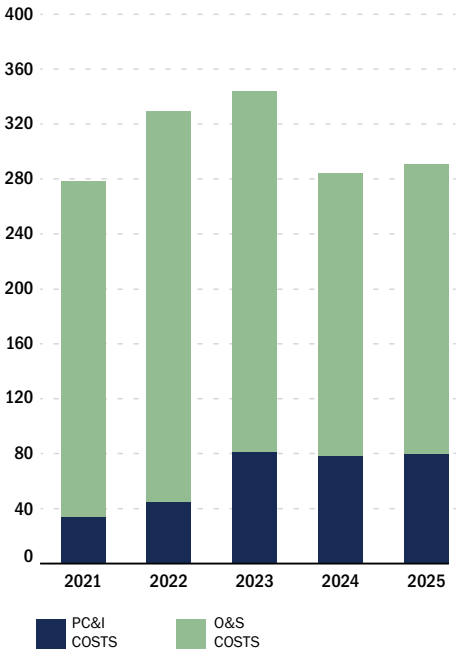
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (07/2012)	3,038	13,174	16,213
Current APB (03/2020)	2,644	15,637	18,280
Current estimate (06/2020)	2,367	13,608	15,975

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In March 2020, DHS leadership approved the program's revised acquisition program baseline (APB) to reflect significant program changes. Specifically, the Coast Guard decided to pursue an all HC-130J fleet, and, in fiscal year 2014, Congress directed the transfer of seven HC-130H aircraft to the U.S. Air Force. The Coast Guard was in the process of upgrading these aircraft but canceled further HC-130H upgrades in August 2018.

The program's total life-cycle cost threshold increased by approximately $2 billion in its revised APB. Specifically, the program's O&S cost threshold increased by nearly $2.5 billion, which is primarily attributed to the extended service life of HC-130J from 30 to 37.5 years. The program's PC&I cost threshold decreased by $394 million. Coast Guard officials primarily attribute the decrease to cost efficiencies achieved by updating its contracting strategy for the fleet of 22 HC-130J aircraft. To inform the budget process, in June 2020, the program updated its life-cycle cost estimate, which is within its current APB cost thresholds.

The program's full operational capability (FOC) date—when all 22 aircraft are operational and assigned to Coast Guard air stations—slipped 6 years from its prior APB threshold to September 2033. Coast Guard officials stated that the delays are primarily the result of the Coast Guard's prioritization of funding requests for ship programs, such as the Offshore Patrol Cutter. However, as of October 2020, the Coast Guard reported 13 HC-130Js had been delivered, one was in the process of being upgraded, and contracts were awarded for three more—some of which were not requested. According to Coast Guard officials, the program has received additional funding in past years, which has allowed the program to accelerate the program's acquisition schedule. As of October 2020, these Coast Guard officials said they estimate that the program was delivering aircraft to the fleet approximately 3 years ahead of the schedule used to inform the revised APB.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Quantity	22
Useful Life (Years)	37.5
Prime Contractor for HC-130J	Lockheed Martin

KEY FINDINGS

Program revised key performance parameters to reflect overarching capabilities of the program.

All HC-130Hs and 13 HC-130Js have received mission system processor upgrades.

Officials expect transfer of HC-130H aircraft to the state of California, Natural Resources Agency by September 2022.

PERFORMANCE AND TESTING

The program updated its operational requirements document in March 2019 to inform the program's re-baseline and refined its key performance parameters (KPP). The program's KPP revisions were intended to identify overarching capabilities for long range surveillance aircraft that meet existing and emerging DHS and Coast Guard missions, rather than HC-130J or HC-130H specific capabilities. Specifically, the program refined five of its seven KPPs to reflect the overarching capabilities. In addition, Coast Guard officials stated that to provide clarity of requirements, one KPP related to endurance was removed and replaced with a KPP related to radius of action, and another KPP related to communications was replaced with a KPP related to interoperability. Coast Guard officials stated that the program is meeting all of its current KPPs.

The Coast Guard is replacing the mission system processor on its fixed-wing aircraft—including the HC-130J—with a system used by the U.S. Navy and DHS's Customs and Border Protection. The new mission system processor is intended to enhance operator interface and sensor management and replace obsolete equipment. In June 2020, Coast Guard officials stated that the legacy mission systems from the HC-130J fleet have all been replaced. As of October 2020, 13 HC-130J aircraft have been equipped with the new mission system processor and delivered to the fleet.

The Coast Guard does not plan to operationally test the new mission system processor on the HC-130J, in part because the aircraft has already been tested. In 2009, DHS's Director, Office of Test and Evaluation and the Coast Guard determined the HC-130J airframe did not need to be operationally tested because the U.S. Air Force conducted operational testing on the base C-130J airframe in 2005. Coast Guard officials told GAO in June 2020 that the HC-130J aircraft has not had any structural changes that would require them to repeat this testing, and systems acceptance and delivery testing are conducted on each aircraft. Instead, the Coast Guard plans to conduct operational testing on the new mission system processor during operational testing on the C-27J, which is new to the Coast Guard's fixed-wing fleet. However, the C-27J's schedule has slipped and the program has not yet revised its schedule.

PROGRAM MANAGEMENT

In December 2013, Congress directed the transfer of seven HC-130H aircraft to the U.S. Air Force for modifications—which consist of upgrades and installing a fire retardant delivery system—and subsequent transfer to the U.S. Forest Service. In August 2018, Congress directed that the U.S. Air Force transfer the modified aircraft to the state of California, Natural Resources Agency, for use by the Department of Forestry and Fire Protection. Coast Guard officials reported that seven aircraft will be transferred to the state of California, Natural Resources Agency. Coast Guard officials said all seven have been identified and are scheduled to be transferred by September 2022, but as of October 2020, no aircraft have been transferred. Coast Guard officials said that three of the seven aircraft completed depot maintenance and that modifications for the retardant delivery system are scheduled to begin in May 2021. These officials said two other aircraft were recently delivered to an Air Force facility to undergo depot maintenance, and the final two aircraft to be transferred are currently conducting Coast Guard missions and are scheduled to arrive at an Air Force facility for depot maintenance in May 2021.

PROGRAM OFFICE COMMENTS

Coast Guard officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

MEDIUM RANGE RECOVERY HELICOPTER (MH-60T) SUSTAINMENT PROGRAM

U.S. COAST GUARD

The MH-60T is a multi-mission, medium range recovery helicopter that the Coast Guard uses to fulfill its missions including search and rescue; disaster recovery; ports, waterways, and coastal security; and drug interdiction. The program aims to maintain 45 helicopters in the Coast Guard's MH-60T fleet through a mix of modernizing the retired Navy SH-60F and HH-60H aircraft and the procurement of new hulls.

Source: U.S. Coast Guard, Petty Officer 3rd Class Joshua Canup. | GAO-21-175

KEY FINDINGS

DHS approved the program's ADE 2A and authorized the program to convert up to 36 Navy hulls.

The program received $225 million between fiscal years 2019 and 2020 to acquire new hulls.

The program's cost estimate includes the cost of nine new hulls, but officials anticipate additional new hulls will be procured.

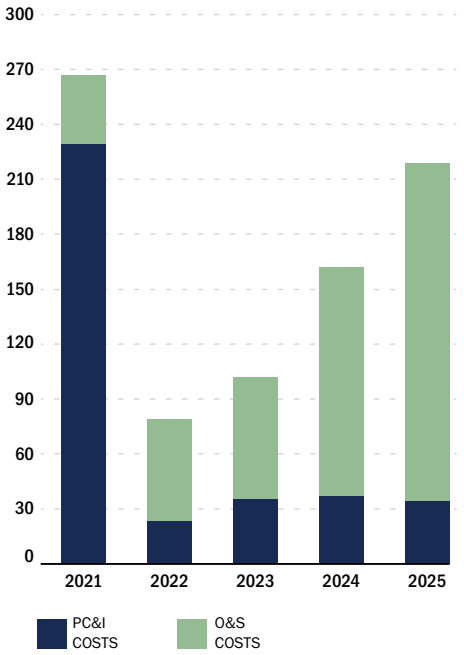
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Preliminary APB (07/2020)	585	9,924	10,509
Initial APB	Not yet approved		
Current estimate (08/2020)	509	8,630	9,138

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS

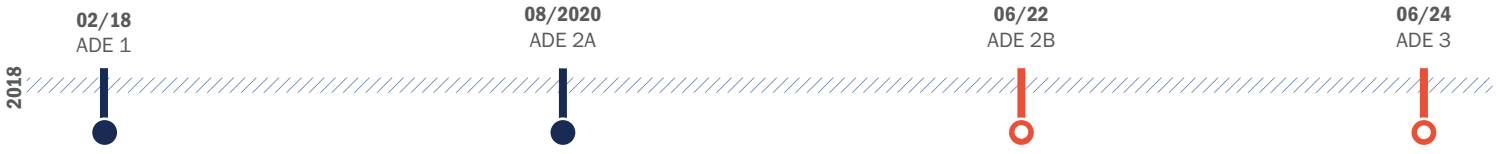


COST AND SCHEDULE

The Coast Guard's current fleet of MH-60T helicopters will begin reaching service life limits of 20,000 flight hours in fiscal year 2023 with an estimated 90 percent of the fleet reaching this limit by fiscal year 2028. In August 2020, DHS leadership approved the program's acquisition decision event (ADE) 2A and authorized the program to convert up to a total of 36 of the Navy's retired SH-60F and HH-60H into the Coast Guard's MH-60T configuration. To avoid an operational gap in the Coast Guard's MH-60T fleet and maintain the skilled labor on the MH-60T production line at the Aviation Logistics Center, DHS leadership previously authorized the Coast Guard to convert 10 of the 36 aircraft prior to achieving ADE 2A. According to Coast Guard officials, the Navy previously transferred retired SH-60F and HH-60H aircraft to the Coast Guard and 45 hulls are viable for conversion and use by Coast Guard operators. On average, the Navy aircraft have accumulated 8,000 flight hours—leaving approximately 12,000 flight hours per aircraft before they reach the end of their service lives. According to Coast Guard officials, the converted Navy aircraft will reach their service life in the 2030s.

In addition to converting Navy hulls to the Coast Guard's MH-60T configuration, the Coast Guard also plans to procure some new hulls from the original equipment manufacturer (OEM); however, the quantity of new hulls has not yet been determined. Between fiscal years 2019 and 2020, the program received a total of $225 million to acquire new hulls, which allows the Coast Guard to stagger its approach to recapitalization. In August 2020, the program developed a preliminary life-cycle cost estimate (LCCE) to inform the preliminary acquisition program baseline. This estimate includes the costs for nine new hulls, but officials stated they anticipate they will be able to procure additional new hulls based on funding received and initial discussions with the OEM. Coast Guard officials stated that they plan to update the LCCE in fiscal year 2021 to reflect these changes. Coast Guard officials plan to achieve ADE 2B in fiscal year 2022.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Quantity	45 MH-60Ts

KEY FINDINGS

Sustainment efforts will not provide increased capability.

The Coast Guard does not plan to operationally test the upgraded aircraft.

Coast Guard officials expect to award the contract for the new hulls by December 2020.

PROGRAM EXECUTION

Coast Guard officials reported that, in addition to the hulls, many of the MH-60Ts components require replacement as part of the sustainment efforts. For example, several components such as the main rotor blades and the main rotor hub, as well as electrical wiring harnesses, need to be replaced. Completion of the MH-60T sustainment efforts will not provide increased capability. The Coast Guard reported that all six of the program's key performance parameters (KPP)—related to endurance, radius of action, cargo capacity, communications interoperability with government and non-government partners, navigational accuracy, and reliability—are being met by the MH-60T helicopter. According to Coast Guard officials, the sustainment efforts will have no effect on the aircraft's ability to meet its KPPs.

The Coast Guard does not plan to operationally test the Navy conversion hulls or the new hulls. According to Coast Guard officials, the ground checks and test flight procedures conducted after the sustainment efforts are completed will validate component installations and satisfy all testing requirements. DHS's Director, Office of Test and Evaluation agreed with this approach and program officials stated that the need for operational testing will be reevaluated if the program's scope evolves, and the need for cyber resiliency testing will be determined in the future.

The program plans to conduct sustainment efforts during the planned maintenance of the MH-60T aircraft at the Coast Guard's Aviation Logistics Center in North Carolina. According to officials, the aircraft hulls will be replaced when an existing MH-60T enters its planned maintenance period as each aircraft approaches the 20,000 flight hour limit. A new wiring harness will be installed when each hull is replaced.

Coast Guard officials said they released a sole source request for proposal to the OEM of the MH-60T hulls, Sikorsky Aircraft Corporation, in June 2020. The Coast Guard plans to award an indefinite-delivery, indefinite-quantity contract with a 5-year ordering period to Sikorsky Aircraft Corporation for the construction of the new hulls by December 2020. The program plans to accept delivery of the first new hull in fiscal year 2023. Coast Guard officials said that the procurement of new hulls provides the Coast Guard with 20,000 total flight hours, and, as a result, the service life of new hulls could be extended into the 2050s.

DHS leadership directed the Coast Guard to address requirements for its vertical-lift capability, including coordinating with Customs and Border Protection, which also maintains a fleet of H-60 aircraft.

PROGRAM OFFICE COMMENTS

Coast Guard officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

MEDIUM RANGE SURVEILLANCE AIRCRAFT (HC-144A/C-27J)

U.S. COAST GUARD

The Coast Guard uses HC-144A and C-27J aircraft to conduct all types of missions, including search and rescue and disaster response. All 32 aircraft—18 HC-144A aircraft and 14 C-27J aircraft—are twin-engine propeller driven platforms. The interiors of both aircraft are able to be reconfigured to accommodate cargo, personnel, or medical transports.

Source: U.S. Coast Guard. | GAO-21-175

KEY FINDINGS

The program declared a schedule breach in May 2020 due to multiple factors.

The Coast Guard has completed mission and flight systems upgrades on eight HC-144A aircraft.

The program's cost estimate does not account for schedule delays.

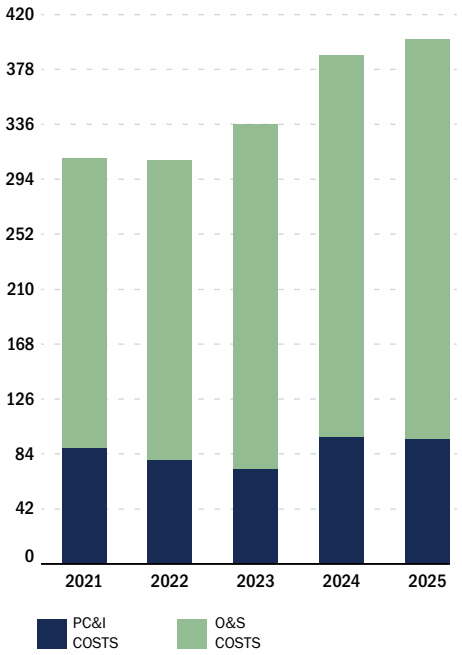
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (02/2009)	2,400	10,867	13,267
Current APB (08/2016)	2,507	12,680	15,187
Current estimate (06/2020)	2,137	10,280	12,417

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



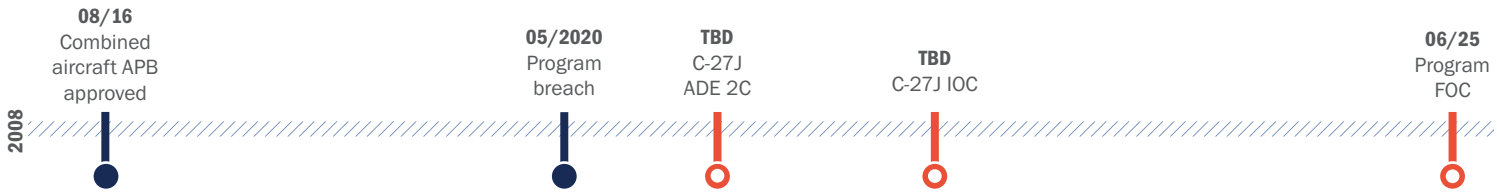
COST AND SCHEDULE

In May 2020, the program declared a schedule breach, which officials explained was because of contracting delays associated with installing a new mission system processor on the first two C-27Js, and finalizing hardware design instructions for production, among other things.

The program's current acquisition program baseline (APB) was approved in August 2016 and reflects the restructuring of the HC-144A acquisition program. The Coast Guard initially planned to procure 36 HC-144A aircraft, but reduced that number to the 18 it had already procured after Congress directed the transfer of 14 C-27J aircraft from the U.S. Air Force to the Coast Guard in fiscal year 2014. The program's APB divides the program into two phases. Phase 1 includes acceptance of the 18 HC-144A aircraft and upgrades to the aircraft's mission and flight management systems. In September 2020, officials said the program completed upgrades on eight of the 18 HC-144A aircraft. Despite delays due to COVID-19, the program plans to complete upgrades on all HC-144As by its APB threshold of June 2025.

Phase 2 includes acceptance of and modifications to the C-27J aircraft to meet the Coast Guard's mission needs. The Coast Guard has accepted all 14 C-27Js from the U.S. Air Force and initiated the upgrades on the first aircraft. Coast Guard officials reported the contractor performing these upgrades requires intellectual property and engineering services from the aircraft's original equipment manufacturer (OEM) to integrate the new mission system processor into the C-27Js. However, Coast Guard officials reported the contractor experienced delays in deliverables from the OEM, including the delivery of the mission system installation kits, which has led to longer installation times. As a result, the program reported it will not meet its acquisition decision event (ADE) 2C for the C-27Js—authorizing low-rate initial production—by March 2021, or initial operational capability (IOC) of the missionized C-27Js by September 2021, since both events require at least two completed C-27Js. In October 2020, Coast Guard officials stated they anticipate the installation of the mission system processor on the second C-27J by June 2021. In June 2020, the program updated its life-cycle cost estimate to inform the budget process, which is within its current APB cost thresholds. However, this cost estimate does not account for the program's schedule slips.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
HC-144A Baseline Quantity	18
HC-144A Useful Life (Years)	40
C-27J Baseline Quantity	14
C-27J Useful Life (Years)	25

KEY FINDINGS

Two performance parameters will not be met until the Coast Guard installs the new mission processor.

Operational testing of C-27J and mission system processor is delayed.

Officials said issues in acquiring spare parts for the C-27J are largely resolved, but the HC-144A is experiencing parts obsolescence challenges.

PROGRAM PERFORMANCE AND EXECUTION

The Coast Guard is replacing the mission system processor on its fixed-wing aircraft—including the HC-144A and C-27J—with a system to support Coast Guard missions and is already used by the Coast Guard, U.S. Navy, and DHS's U.S. Customs and Border Protection. The new mission system processor is intended to enhance operator interface and sensor management and replace obsolete equipment. Neither the HC-144A nor the C-27J will be able to meet two of their seven key performance parameters (KPP) until the Coast Guard installs the new mission system processor on the aircraft. These two KPPs are related to the detection of targets and the aircraft's ability to communicate with other assets.

The Coast Guard does not plan to operationally test the new processor on the HC-144A because the aircraft already underwent operational testing in July 2012 and the processor will be tested during the C-27J's operational test event. In August 2012, DHS's Director, Office of Test and Evaluation determined that the aircraft was operationally effective with limitations and operationally suitable with limitations. Coast Guard officials previously stated that they are addressing these limitations with upgrades to the new mission system. The program plans to conduct developmental testing on the C-27J once the first aircraft is complete. In addition, the Coast Guard plans to operationally assess the new mission system processor during operational testing of the C-27J. Coast Guard officials reported that they are updating the program's test and evaluation master plan and schedule in response to the program's breach and the schedule for testing the C-27Js has not yet been determined. According to officials from DHS's Test and Evaluation Division, cyber resiliency testing will be conducted during operational testing.

In fiscal year 2018, congressional conferees supported $18 million for the Coast Guard to purchase a flight simulator for training purposes. According to Coast Guard officials, procurement of the flight simulator in fiscal year 2018 addressed C-27J training needs and provided over $15 million in cost savings for the program. Coast Guard officials explained the cost savings are largely a result of decreased travel time. For example, pilots can travel to the simulator in Texas in one day versus spending multiple days traveling to Italy where the original equipment manufacturer is located.

GAO previously found that the program faced challenges purchasing spare parts and accessing technical data for the C-27J, which was affecting the Coast Guard's ability to transition the aircraft to the fleet. Coast Guard officials told GAO that these issues are improving. Specifically, they stated that the program has awarded five major contracts to the aircraft OEM and other suppliers for spare parts and purchased spare parts in bulk in 2017 to maintain the fleet. In June 2020, Coast Guard officials reported that, while the issues related to spares for the C-27J had largely been resolved, obsolescence of parts on the HC-144A is a challenge.

PROGRAM OFFICE COMMENTS

Coast Guard officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

NATIONAL SECURITY CUTTER (NSC)
U.S. COAST GUARD

The Coast Guard uses the NSC to conduct search and rescue, migrant and drug interdiction, environmental protection, and other missions. The NSC replaces and provides improved capabilities over the Coast Guard's High Endurance Cutters. The NSC carries helicopters and cutter boats, provides an extended on-scene presence at forward deployed locations, and operates worldwide.

Source: U.S. Coast Guard. | GAO-21-175

KEY FINDINGS

The program is updating acquisition documents—including the APB—to reflect the addition of the 10th and 11th NSC.

Congressional conferees included $100.5 million for a 12th NSC, but Coast Guard proposed $70 million to be used instead to fund other shipbuilding priorities.

Additional PC&I funds are needed to support NSCs 10 and 11 through fiscal year 2025.

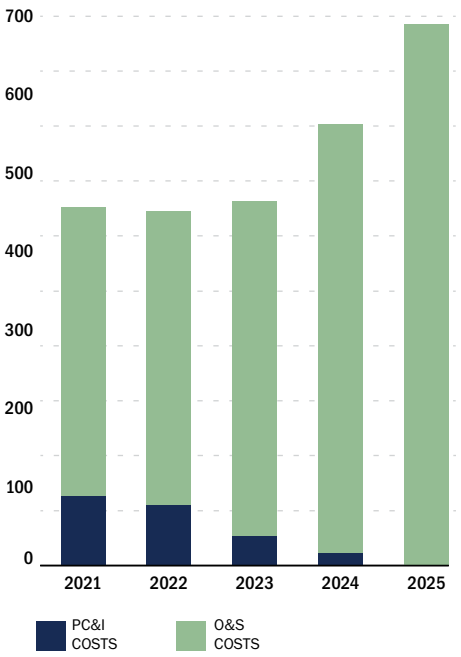
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (12/2008)	4,749	19,528	24,277
Current APB (11/2017)	6,135	16,410	22,545
Current estimate (06/2020)	7,254	16,848	24,102

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



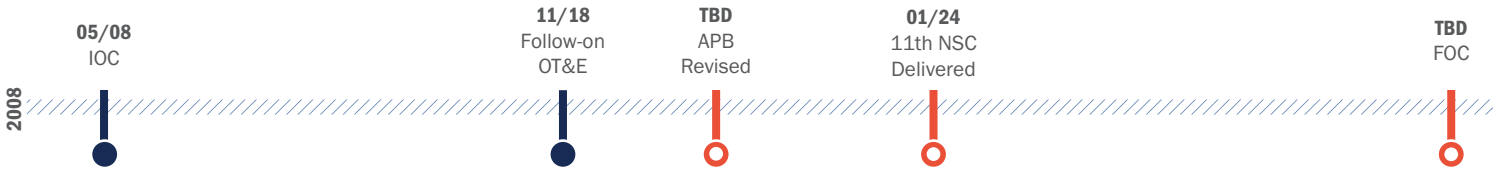
COST AND SCHEDULE

The Coast Guard originally planned to acquire eight NSCs; however, in fiscal year 2016 Congress appropriated funds specifically for the production of a ninth NSC, and congressional conferees included funds in fiscal year 2018 for NSCs 10 and 11. In fiscal year 2020, the conference report noted that $100.5 million was for long-lead time materials for a 12th NSC should the Coast Guard determine the additional cutter is necessary. However, Coast Guard officials told GAO that $70 million is planned to be used to fund higher priorities, such as the Coast Guard's Polar Security Cutter program, but the remaining $30 million would be available to procure equipment for NSCs 10 and 11. The program anticipates an affordability gap of $205 million between fiscal years 2021 and 2025. Additional PC&I funds are needed to cover non-shipbuilder costs such as program and maintenance costs for NSCs 10 and 11.

According to program officials, the Coast Guard awarded a contract to produce the ninth NSC in December 2016 and a production contract for the 10th and 11th NSCs in December 2018. As of July 2020, eight NSCs have been delivered, the ninth NSC is planned for delivery by November 2020, and the remaining two NSCs are planned to be delivered in January 2023 and January 2024.

Coast Guard officials said the program is updating its acquisition documentation—including the acquisition program baseline (APB)—to reflect the additional NSCs and they expect the updates to be complete in fiscal year 2021. To inform the budget process, the program updated its life-cycle cost estimate to include the 10th and 11th NSCs. As a result, the program's life-cycle costs exceed the current APB thresholds. Despite this cost growth, the program's total life-cycle cost is still less than the program's initial estimate for eight ships. Coast Guard officials attributed the decrease to more accurate estimates and reduced O&S costs. The program's current APB cost thresholds already reflect cost growth that occurred earlier in the program when the program implemented several design changes to address equipment issues. Coast Guard officials reported that the program is on track to meet its current approved APB schedule, but the program's full operational capability (FOC) date is expected to be revised to 2025 to account for the additional NSCs and post-delivery activities, such as training and system installations.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
FOC Quantity	11
Quantity Delivered	8
Quantity on Contract	11
Prime Contractor	Huntington Ingalls Industries (HII)

TEST EVENTS

Follow-on OT&E completed	November 2018
Unmanned aerial surveillance aircraft cyber resiliency test	Postponed to October 2020 due to COVID-19

KEY FINDINGS

Program is addressing deficiencies found during follow-on OT&E and cyber testing.

Delays related to Navy provided equipment for NSCs 9, 10, and 11 may result in additional work after delivery.

Program is managing risks related to obsolescence of parts for new cutters, including a navigation system.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): U.S. NAVY OPERATIONAL TEST AND EVALUATION FORCE

In July 2020, Coast Guard officials reported that the program demonstrated all of its 19 key performance parameters (KPP) either through operations or during follow-on operational test and evaluation (OT&E). Follow-on OT&E was completed in November 2018. DHS's Director, Office of Test and Evaluation (DOT&E) assessed the test results and determined the NSC was operationally effective, but suitable with limitations because of issues related to availability and the reliability of certain equipment. DOT&E's assessment of cyber resiliency is classified. DOT&E recommended that the program address the OTA's findings and periodically assess cybersecurity. In July 2020, Coast Guard officials told GAO that eight of 14 deficiencies related to availability and reliability of equipment were addressed, and they plan to address the remaining six deficiencies, including Navy owned systems, 3D radar, and remote operational valves. In addition, Coast Guard officials stated that the program also resolved most of its cybersecurity deficiencies.

In November 2019, the program's KPP related to unmanned aerial surveillance aircraft was demonstrated using a prototype unmanned aircraft on an NSC. However, Coast Guard officials reported that issues related to a bid protest delayed the Coast Guard's acquisition of a fleet-representative aircraft. Coast Guard officials stated they partially completed cyber testing on the Unmanned Aerial Surveillance Aircraft, but the remaining cyber events have been postponed due to COVID-19 and are expected to be completed in October 2020.

Program officials said the Coast Guard completed a study directed by DHS's USM to identify the root cause of issues with the NSC's propulsion systems. In January 2016, GAO reported on these issues, which included high engine temperatures and cracked cylinder heads. Coast Guard officials reported in July 2020 that the program is implementing corrective measures for eight of the nine issues identified in the study during regular maintenance periods at a cost of $3 million, and these corrections are not affecting maintenance schedules or cutter availability. Coast Guard officials said they will assess the need to implement the last corrective measure—a raw water flow analysis and system modifications—following completion of the other measures on NSC 9 and assessing those results.

PROGRAM MANAGEMENT

According to program officials, the Coast Guard relies on the Navy to request funding for and provide certain weapon systems on the NSC, such as the Close In Weapon System, which includes a radar-guided gun used to protect against anti-ship cruise missiles. Coast Guard officials previously told GAO that some of these Navy systems may be unavailable to support the production of NSCs nine through 11, since these additional cutters were unplanned and the Navy did not include funding for some of these systems in its budget requests. Further, Coast Guard officials stated that NSC 9 will not be constructed with the radar-guided gun as it is unavailable, but officials said they will mitigate these issues by performing additional post-delivery installation and testing on affected systems and equipment. These officials also stated they received assurances from the Navy that funding is available to procure and install these systems during construction of NSCs 10 and 11.

The program is managing risks related to the obsolescence of spare parts. Specifically, Coast Guard officials stated they are coordinating with the Navy to develop, test, and install an upgraded navigation system and various weapon systems such as the Close In Weapon System.

PROGRAM OFFICE COMMENTS

Coast Guard officials stated that with the exception of the small unmanned aerial surveillance aircraft, follow-on OT&E is complete. Flight testing for this aircraft was completed in November 2019 and it was declared operationally effective. Final cyber testing for this aircraft is planned for fiscal year 2021. Coast Guard officials also provided technical comments on a draft assessment, which GAO incorporated as appropriate.

OFFSHORE PATROL CUTTER (OPC)

U.S. COAST GUARD

The Coast Guard plans to use the OPC to conduct patrols for homeland security, law enforcement, and search and rescue operations. The OPC is being designed for long-distance transit, extended on-scene presence, and operations with deployable aircraft and small boats. It is intended to replace the Coast Guard's aging Medium Endurance Cutters (MECs) and bridge the operational capabilities provided by the Fast Response Cutters and National Security Cutters.

Source: ©2016 Eastern Shipbuilding Group, Panama City, FL. | GAO-21-175

KEY FINDINGS

Program restructured into two stages, with stage 1 for OPCs 1-4 and stage 2 for OPCs 5-25.

Program experienced a schedule breach when it could not achieve ADE 2C in December 2019 as planned.

The program does not currently have an updated cost estimate for all 25 cutters.

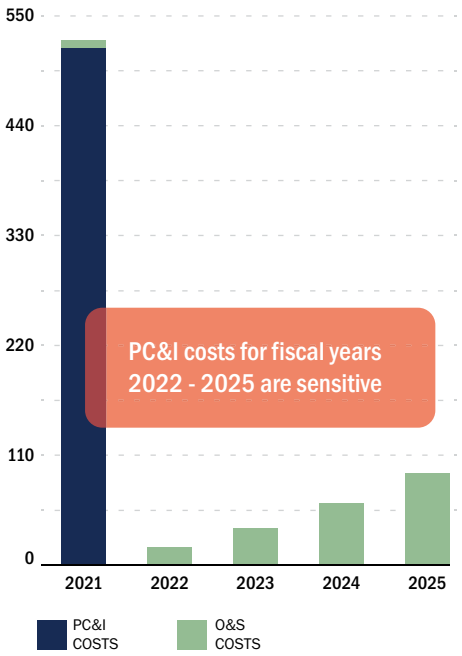
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (04/2012)	12,101	41,895	53,996
Preliminary APB (03/2020)	14,576	39,131	53,767
Current estimate (06/2020)	12,676	34,079	46,755

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

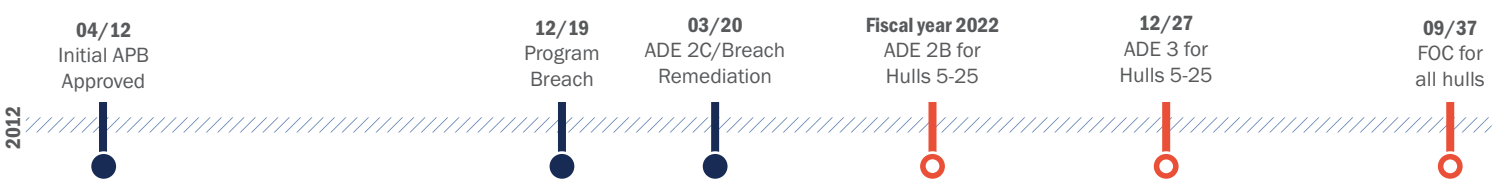
In October 2018, Hurricane Michael caused extensive damage to the facilities of the program's shipbuilder, Eastern Shipbuilding Group (ESG). After determining that it could no longer meet contract terms due in part to skilled labor shortages, infrastructure damage, and loss in production efficiency, ESG requested schedule relief in March 2019 and cost relief for OPCs 1 through 9 in June 2019. In October 2019, based on recommendations made by a DHS contract adjustment board, the Acting Secretary of DHS granted extraordinary contractual relief to ESG for national defense purposes in accordance with Public Law 85-804, authorizing cost relief to ESG for the first four OPCs (stage 1) and directing the program to recompete the requirement for OPCs 5 through 25 (stage 2).

The OPC program experienced a schedule breach in December 2019 when it could not achieve acquisition decision event (ADE) 2C—to award construction of OPC 2—as planned. In response, the program revised its baseline to reflect its new acquisition strategy and to inform the program's ADE 2C, which DHS leadership approved in March 2020. However, in October 2020, GAO found that the program had not fully revised its schedule to inform the revised baseline and the program's life-cycle cost estimate lacked critical analyses. The revised acquisition program baseline (APB) established cost and schedule goals for stage 1 of the program and established preliminary cost and schedule goals for stage 2. The Coast Guard plans to conduct a full and open competition for stage 2 of the new acquisition strategy and award one or more contracts by January 2022—prior to finalizing the stage 2 APB.

In March 2020, the program completed a preliminary cost estimate for all 25 OPCs. The total PC&I cost for the 25 OPCs in the preliminary estimate is $12.7 billion—a 23 percent increase from the program's previous estimate of $10.3 billion. However, the total life-cycle cost for all 25 cutters is not yet known.

The program's initial operational capability date slipped by approximately 18 months, but the program's full operational capability (FOC) date will not be revised until the program develops its stage 2 APB. The program's ADE 3 and full operational capability date will remain preliminary until a contract award is made for stage 2.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Primary Contractor (Hulls 1-4)	Eastern Shipbuilding Group
Primary Contractor (Hulls 5-25)	TBD
Contract Type for Hulls 1-4	Fixed-Price Incentive Fee

TEST EVENTS

Initial operational testing	09/2025

KEY FINDINGS

The program began construction of the first two OPCs prior to design stability.

The program does not have a comprehensive risk management process in place.

The Coast Guard does not plan to perform initial operational testing until after delivery of OPCs 1-3.

PROGRAM EXECUTION

The OPC program faced a number of program risks before the Coast Guard authorized construction of OPC 1 in September 2018, a month before Hurricane Michael. However, since the hurricane, these risks have been carried forward and in some cases exacerbated. In October 2020, GAO found that the program faces risks in three key areas: (1) design and testing, (2) schedule, and (3) cost. Specifically, the Coast Guard began construction of the first two OPCs without completing the functional design and maturing its single critical technology, contrary to shipbuilding best practices identified by GAO, which emphasize design stability prior to construction to reduce cost and schedule risks. Additionally, GAO found that the program's lack of a comprehensive risk management process limits the program's ability to effectively manage cost and schedule risks. For example, program officials did not regularly update program documentation to reflect the program's current status and risks, nor did they comprehensively record management actions to ensure risks are appropriately addressed as outlined in DHS and Coast Guard policies.

The program's testing schedule and risks changed with the March 2020 re-baseline, but the program did not revise its test and evaluation master plan in support of ADE 2C. Coast Guard officials stated that they did not believe it was necessary to update the test and evaluation master plan because it did not change significantly for OPCs 1-4, which are part of stage 1, post-hurricane. However, as a result of the program's revised acquisition strategy, the test results will not be completed in time to inform construction of any of the stage 1 OPCs. Specifically, the Coast Guard plans to complete initial operational test and evaluation in fiscal year 2025—after three of the four OPCs from stage 1 are delivered and within months of the fourth being delivered. According to Coast Guard officials, the program plans to use engineering reviews and developmental testing to inform the OPCs' performance and minimize the risks of delayed or unsuccessful testing.

These officials added that the program also plans to conduct an operational assessment on the lead ship in late fiscal year 2021 to identify operational risks.

The Coast Guard completed an early operational assessment on the OPC's basic ship design in January 2018. According to Coast Guard officials, the program refined the ship's design based on the results of the assessment, which focused on maintainability, supportability, and sufficient facilities to onboard required personnel during a large scale rescue. In January 2018, the operational test agent also recommended the program conduct a comprehensive manning analysis to ensure the cutter can be maintained as designed with the planned crew size.

In October 2020, GAO made eight recommendations to DHS and the Coast Guard to address risks GAO identified with the OPC program. GAO recommended that DHS ensure the Coast Guard revises the OPC's stage 1 APB to reflect the delivery dates and include delivery dates in the stage 2 APB, update the program's stage 1 cost estimates in accordance with best practices, and identify risks associated with the program's test strategy for stage 1 GAO-21-9. GAO also recommended that the Coast Guard should revise its policy related to design maturity in accordance with shipbuilding best practices identified by GAO and ensure the OPC program demonstrates design stability of OPC 1 before beginning construction on OPC 3, update its schedules for OPCs 1 through 4, and improve its risk management process. DHS and the Coast Guard concurred with the eight recommendations and have initiated steps to implement them.

PROGRAM OFFICE COMMENTS

Coast Guard officials stated that the program recognized the need to balance competing risks, requiring tailored acquisition processes and other tradeoffs to ensure timely and cost effective production of OPCs. Officials said the shipbuilder achieved 80 percent design maturity before start of construction, which they said is consistent with Navy best practices. They said the shipbuilder's design efforts were impacted by the hurricane but 97 percent of the functional design is complete. Coast Guard officials also provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

POLAR SECURITY CUTTER (PSC)
U.S. COAST GUARD

The PSC program—formerly designated as the Heavy Polar Icebreaker—is intended to assist the Coast Guard in maintaining access to Arctic and Antarctic polar regions. The Coast Guard requires its icebreaking fleet to conduct multiple missions, including defense readiness; marine environmental protection; ports, waterway, and coastal security; and search and rescue. The Coast Guard plans to acquire three PSCs to recapitalize its heavy polar icebreaker fleet, which currently consists of one operational cutter.

Source: VT Halter Marine, Inc. | GAO-21-175

KEY FINDINGS

Program awarded a $746 million detail design and construction contract to VT Halter Marine, Inc. in April 2019.

Cost and schedule estimates have not yet been revised to reflect information from the shipbuilder.

Program's aggressive schedule remains a significant risk to program execution.

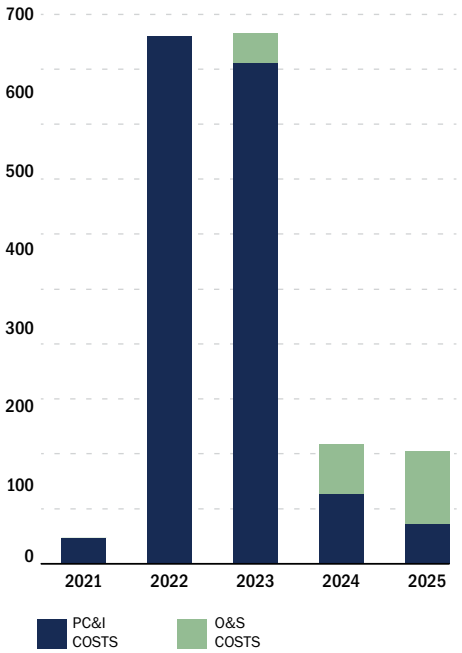
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (01/2018)	3,207	6,594	9,827
Current APB (01/2018)	3,207	6,594	9,827
Current estimate (06/2020)	2,574	5,756	8,330

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



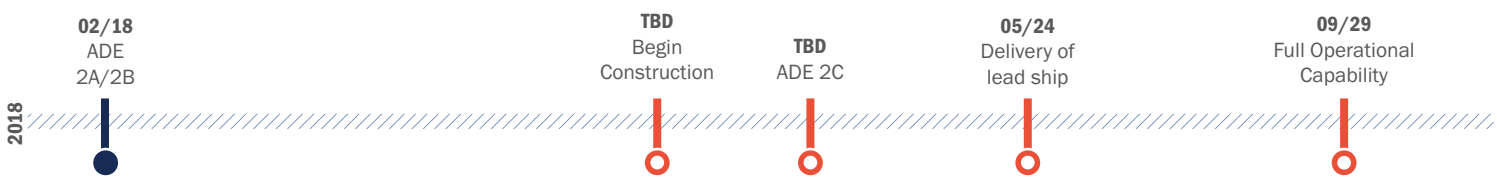
COST AND SCHEDULE

In April 2019, the program awarded a $746 million contract to VT Halter Marine for the detail design and construction of the lead PSC. In November 2020, program officials said they were still in the process of revising key acquisition documents including the program schedule, life-cycle cost estimate (LCCE), and acquisition program baseline (APB) with information from the shipbuilder. For example, delivery of the lead ship is anticipated in May 2024—2 months after the program's APB threshold date. In June 2020, the program updated its previous LCCE to inform the budget process, but this estimate did not reflect cost changes following the contract award.

In February 2018, the program achieved a combined acquisition decision event (ADE) 2A/2B, which authorized the initiation of development efforts after DHS leadership approved the program's initial APB. However, in September 2018, GAO found that the program's LCCE is not fully reliable though it adheres to most cost estimating best practices. This was due, in part, to the cost estimate not quantifying the range of possible costs over the entire life of the program. Similarly, GAO found that the program's planned delivery dates are optimistic because they are not informed by a realistic assessment of shipbuilding activities. Instead, the schedule is driven by the potential gap in icebreaking capabilities. Coast Guard officials acknowledged the schedule and cost risks identified by GAO and stated that they plan to address these risks as part of the acquisition documentation updates that will inform the program's ADE 2C. However, during a briefing to Coast Guard leadership in April 2020, PSC program officials reported that the program's aggressive schedule continues to be one of the program's most significant risks. Program officials told GAO that the program is assessing the timing for the production readiness review prior to construction beginning on hull 1.

From 2013 through 2020, the program received $1.14 billion in funding—$835 million in Coast Guard appropriations and $300 million in Navy appropriations. Coast Guard officials stated that the lead ship is fully funded but any funding gaps in the future may result in delays to delivery of the two follow-on cutters.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Primary Contractor	VT Halter Marine, Inc.
Planned Ships	3

TEST EVENTS

Initial operational test and evaluation	03/2025

KEY FINDINGS

Program completed model testing, but additional testing is planned.

Delays in design maturity could lead to schedule delays.

Program officials reported that the contractor is experiencing staffing challenges.

PROGRAM EXECUTION

In June 2019, DHS's Science and Technology Directorate completed a technology readiness assessment of the program and determined that the PSC has three critical technologies that are mature or approaching maturity: azimuthing propulsors, the integrated electric propulsion system, and the hull form. For the hull form—the only critical technology designated as not yet mature—the Coast Guard completed ice model and seakeeping testing to reduce risks. The results of the model testing identified that the hull form has yet to achieve a mature state and did not meet the requirement for breaking out of a channel. Follow-on model testing is planned for late summer 2020.

In April 2020, the program conducted its preliminary design review and, according to program officials, determined that design maturity is a significant risk to ship production. Program officials said the shipyard experienced schedule delays in designing the ship on the originally planned schedule due, in part, to social distancing requirements as a result of COVID-19. They added that if design maturity does not progress as planned, the program may experience construction and delivery delays. Program officials stated that they are monitoring the shipbuilder's progress. In August 2020, Coast Guard officials said the shipbuilder plans to begin construction in early 2021, with a design maturity rate of 85 percent.

The program plans to demonstrate its four key performance parameters (KPP) through a series of test events. The program's KPPs are related to the ship's ability to independently break through ice, the ship's operating duration, and communications. In November 2017, DHS's Director, Office of Test and Evaluation approved the program's test and evaluation master plan, which calls for initial operational testing to begin in fiscal year 2024 after the scheduled delivery of the first PSC.

PROGRAM MANAGEMENT

The Coast Guard established an integrated program office and ship design team with the Navy. In 2017, DHS, the Coast Guard, and the Navy entered into several agreements that outline major roles and responsibilities, including the Navy's role in contracting on behalf of the Coast Guard. The ship design team provided technical oversight for the development of the PSC's concept designs, which the Coast Guard used to inform the ship's specifications and the program's initial LCCE.

According to Coast Guard officials, in 2019, the Coast Guard and the Navy established a project residence office at the shipbuilder's facility in Pascagoula, Mississippi, to provide oversight of shipbuilding efforts. Coast Guard officials told GAO that the shipbuilder is experiencing challenges recruiting subcontractors for ship construction. In August 2020, program officials stated that the contractor was leveraging staff from other shipbuilding projects to mitigate the gap, but additional staffing is necessary before construction efforts are fully underway to avoid schedule delays.

In September 2018, GAO made six recommendations to DHS, the Coast Guard, and the U.S. Navy to address risks GAO identified with the PSC program. As of August 2020, three of the six recommendations remain open. For additional information see GAO-18-600.

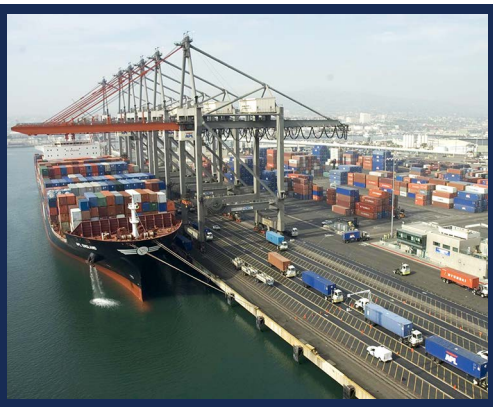
PROGRAM OFFICE COMMENTS

Coast Guard officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

AUTOMATED COMMERCIAL ENVIRONMENT (ACE)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

The ACE program is developing software that is intended to electronically collect and process information submitted by the international trade community. ACE is intended to provide private and public sector stakeholders access to information, enhance the government's ability to determine whether cargo should be admitted into the U.S., increase the efficiency of operations at U.S. ports by eliminating manual and duplicative trade processes, and enable faster decision-making.



Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

ACE Core achieved full operational capability in November 2018, but Collections capability is still being deployed.

ACE Collections deployed Release 1 in September 2019, and other releases are planned for the next few years.

Officials stated Collections is addressing affordability issues by securing Technology Modernization Funds.

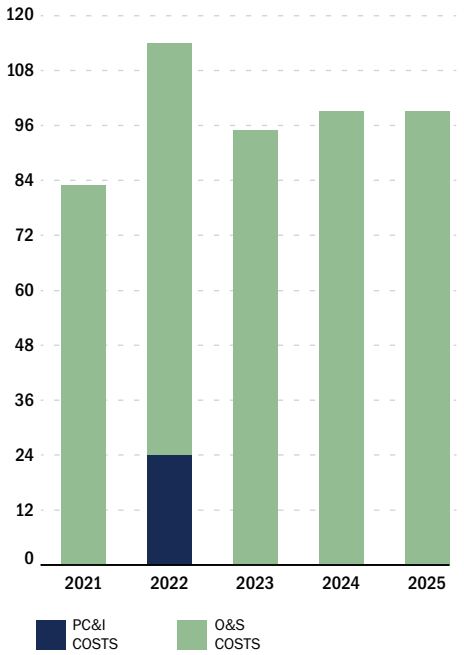
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (08/2013)	2,039	2,412	4,451
Current APB (06/2020)	2,491	3,023	5,514
Current estimate (06/2020)	2,169	2,618	4,786

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

Following a cost and schedule breach in April 2017, CBP separated the ACE program's Collections functionality—which collects and processes duties owed on imported goods—from its Core functionality to permit deployment of the other post-release capabilities, such as Liquidations and Reconciliation. ACE continued deployment of the Core functionality and achieved full operational capability (FOC) and acquisition decision event (ADE) 3 approval in November 2018. However, the program continued development of a mass processing update function for Entry, Summary, Accounts and Revenue (ESAR), which provides import and entry specialists with electronic data to conduct government review and analysis. CBP officials stated that ESAR capability was deployed in February 2020.

In August 2018, the program received DHS leadership approval to defer Collections functionality and the legacy system would continue to provide this capability until funding for new development was provided. As a result, CBP planned to develop and deploy the Collections functionality incrementally through eight releases. DHS leadership approved an ADE 2B for Collections Release 1 in March 2019, after funding for that portion of the work was identified. ACE Collections achieved initial operational capability (IOC) in September 2019 when capability planned for Release 1 was deployed.

In June 2020, DHS leadership approved an acquisition program baseline (APB) for ACE, which included ACE Collections Releases 1-5 and an ADE 2B for Collections Releases 2-5. As a result, the program's total life-cycle cost threshold increased by more than $113 million. According to CBP officials, adequate funding for Collections Releases 2-5 has been identified. Specifically, CBP officials anticipate receiving $15 million in Technology Modernization Funds, an IT working capital fund, with additional funding identified from within CBP. The program plans to achieve an ADE 2B by April 2021 for releases 6-8, if funding is identified, with FOC for ACE Collections anticipated by July 2024.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1
Software Development	Agile Development
ACE Collections Releases Quantity	8

TEST EVENTS

ACE Core mass processing follow-on OT&E	08/2020
Cybersecurity testing	12/2020
ACE Collections OT&E for Releases 1-5	09/2022

KEY FINDINGS

COVID-19 led to delayed testing events and remote testing.

Program officials plan to conduct testing of ACE Collections after completion of Releases 1-5.

CBP officials stated the program is tracking risks such as bid protests for ACE.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): CBP OFFICE OF FIELD OPERATIONS

In November 2018, DHS's Director, Office of Test and Evaluation (DOT&E) assessed the test results of operational test and evaluation (OT&E) completed on multiple releases of ACE Core capabilities. DOT&E determined that ACE Core functionality: (1) met all four of its key performance parameters (KPP), (2) is operationally suitable and effective with limitations, but (3) cyber resiliency was not evaluated. DOT&E recommended that the program continue development of the ESAR capabilities to improve operational effectiveness, conduct follow-up OT&E to ensure the issues are corrected, and conduct cyber resiliency testing. Follow-on OT&E was completed for ACE Core capability in July 2020 and the OTA determined that all critical operational issues, including those related to ESAR, had been resolved. CBP officials stated that cyber resiliency testing was delayed as a result of the COVID-19 pandemic but they anticipate the results of cyber resiliency testing will be finalized by December 2020.

In June 2020, after approving the program's revised APB, DHS leadership tasked the program with updating its operational requirements document (ORD) to reflect critical operational issues and the planned FOC date for Collections. As of November 2020 the ORD had not yet been approved, but CBP officials reported that there would be no updates to the program's four KPPs related to availability of the system, providing targeted cargo data, electronically processing import and export documents, and acting as a single window for trade data. CBP officials stated that ACE Collections OT&E for Releases 1-5 is planned for September 2022 and OT&E for later Releases 6-8 is planned for January 2024.

PROGRAM MANAGEMENT

In addition to the funding concerns for future releases 6 through 8, CBP officials are tracking and managing program risks related to contracting, among other things. For example, CBP officials reported that bid protests of the Development and Operations and Maintenance Support contract could result in further delays in the development of ACE Collections. Program officials stated in October 2020 that the program has extended a bridge contract to continue development and they expect the protests to be resolved before the bridge contract expires.

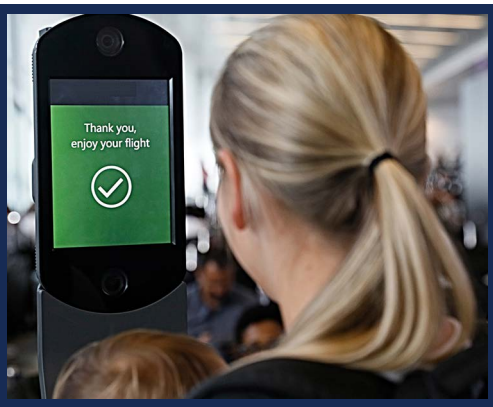
PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

BIOMETRIC ENTRY-EXIT (BEE) PROGRAM

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

The BEE program aims to enhance the immigration system by verifying travelers' identities as they enter and leave the U.S. at air, land, and sea ports of entry. It is intended to help CBP identify foreign nationals that stay in the U.S. beyond their authorized periods of admission. To accomplish this, CBP is developing and deploying capabilities used to match a traveler's live photo to photos in DHS databases, such as passport photos, through its Traveler Verification Service (TVS). The program will be implemented in segments that align with the traveling environments—air, land, and sea—and is currently focused on the air segment.



Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

Program breached its cost and schedule goals for air-exit capability, but re-baselined when ADE 3 was achieved in January 2020.

Program continues to assess strategies for implementing land and sea segments.

According to officials, funding challenges may limit the program's ability to initiate land and sea segments.

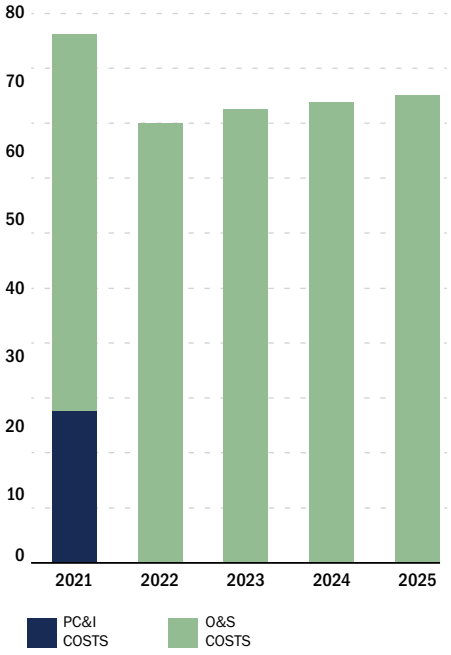
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (05/2018)	197	520	717
Current APB (12/2019)	259	982	1,241
Current estimate (12/2019)	225	854	1,079

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In January 2020, DHS leadership approved the program's acquisition decision event (ADE) 3 of the air-exit capability—authorizing full-rate production and deployment—and removed the program from cost and schedule breach status. The program planned to achieve ADE 3 by September 2019, but according to CBP officials, the program experienced delays in completing testing. Further, in December 2019, the program completed an update of its life-cycle cost estimate, which exceeded the program's previous acquisition program baseline (APB) cost thresholds. As a result, the program's total life-cycle cost threshold—which captures costs for only the air segment—increased by more than $500 million. The cost increases are primarily attributed to increases in program management costs, system deployment and implementation costs, and the costs of technology updates for the air-entry system. CBP officials said the program's air segment is on track to meet its planned full operational capability (FOC) date of September 2021, which includes the ability to process international air departures at the 20 airports with the highest volume of international flights.

In September 2020, CBP officials said the program continues to assess strategies for implementing the land and sea segments. However, due to funding challenges, officials were unsure when the program would initiate the land and sea segments. The BEE program is primarily funded by fees. Congress provided that half the amount collected from fee increases for certain visa applications from fiscal years 2016 through 2025—up to $1 billion—would be available to DHS until expended for the development and implementation of the BEE system. In February 2018, Congress extended this period through fiscal year 2027. CBP officials said the current funding structure poses challenges because fees fluctuate based on immigration rates. These officials explained that the decline in immigration rates as a result of COVID-19, among other things, resulted in a decline of fees collected. CBP officials stated the program received $36 million in funding for fiscal year 2020—$23 million less than anticipated—and they expect affordability challenges in fiscal year 2021. CBP officials said the program has carryover funding to mitigate the gap in fiscal year 2020, but they are coordinating with CBP and DHS officials to assess and identify other sources of funding.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	IT
Acquisition Level	1
Segments	Air, Land, and Sea
Partnerships with Airlines	29

TEST EVENTS

Follow-on OT&E	TBD
Initial OT&E	06/2019

KEY FINDINGS

The program met its four key performance parameters for air-exit capabilities.

Air-exit capabilities were determined to be operationally suitable, with the potential of being operationally effective.

CBP is continuing to evaluate technologies for the land and sea environments.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): CBP SUPERVISORY OFFICER

In December 2019, DHS's Director, Office of Test and Evaluation (DOT&E) determined the BEE air-exit segment: (1) met its four key performance parameters; (2) has the potential to be operationally effective; (3) and is operationally suitable; but (4) cyber testing was not adequate to evaluate cyber resilience. DOT&E explained that BEE's air-exit segment did not satisfy all of the end user's operational requirements and did not clearly demonstrate enhanced operational capability during operational test and evaluation (OT&E). For example, DOT&E noted that the air-exit segment system accurately and efficiently matches captured traveler images with image galleries as expected. However, the system only captures approximately 80 percent of in-scope travelers on biometrically processed flights. DOT&E also stated that most of the capture rate issues are a result of airlines reverting to manual passenger processing to speed the boarding process. In addition, the system alerts CBP officers of non-matches, but the notifications do not provide actionable information or provide any apparent benefits to CBP operations during the boarding process. Data provided by CBP showed an increase in confirmation rates of foreign nationals that stay in the U.S. beyond their authorized periods of admission through the use of the air-exit segment system. DOT&E acknowledged that the confirmation rates should increase as more airlines implement the system.

DOT&E recommended that the program (1) update its concept of operations (CONOPS) and operational requirements document (ORD) to describe the expected benefits of each of BEE's segments; (2) coordinate with airlines and airports to update image capture device standards and procedures to improve the capture rate; (3) monitor system performance to ensure BEE will meet requirements at FOC; and (4) develop a plan for OT&E of cyber resilience in coordination with the OTA.

In September 2020, CBP officials told GAO the program was coordinating with stakeholders to update the CONOPS and ORD.

CBP is pursuing public/private partnerships in which airlines and airports invest in the equipment to collect biometric data to reduce program costs and improve the passenger boarding process. In September 2020, CBP officials told GAO they have received commitment letters from 29 airports and airlines since March 2018.

CBP officials reported they continue to evaluate technologies for the land and sea environments. Since 2018, CBP has been conducting pilot tests at six seaports. The sea segment will likely be structured like the air-exit segment, where cruise line carriers procure and operate facial recognition cameras and transmit images to the TVS. For the land segment, CBP plans to procure and operate the cameras and transmit images. However, the land environment poses some logistical challenges because CBP does not receive manifests for international travelers crossing the land border, which limits CBP's ability to match photos. As a result, CBP officials stated they expect to begin deployments for the sea segment prior to the land segment.

PROGRAM MANAGEMENT

Since 1996, several federal statues have required development of an entry and exit system for foreign nationals. DHS has been exploring biometric exit capabilities since 2009 and an Executive Order issued in March 2017 directed DHS to expedite the implementation of the BEE system.

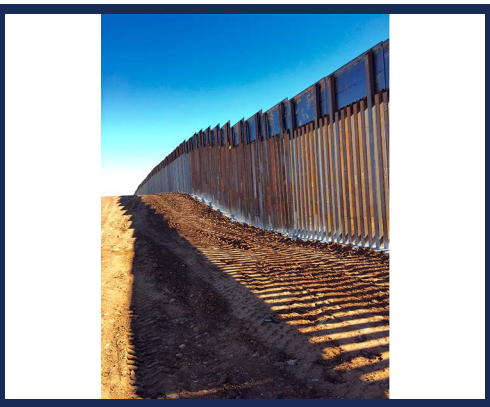
PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

BORDER WALL SYSTEM PROGRAM

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

The border wall system is intended to prevent the illegal entry of people, drugs, and other contraband by enhancing and adding to over 650 miles of existing barriers along the U.S. southern border. CBP plans to create a border enforcement zone that may also include detection technology, surveillance cameras, lighting, and roads for maintenance and patrolling. The border wall system is constructed in segments prioritized by U.S. Border Patrol.



Source: Customs and Border Protection. | GAO-21-175

PROGRAM EXECUTION

The Border Wall System Program was initiated in response to an Executive Order issued in January 2017. The order stated that the executive branch is to secure the southern border through the immediate construction of a physical wall on the southern border of the U.S. In December 2017, CBP completed testing of eight barrier prototypes to help refine the requirements and identify new design standards for barriers. U.S. Border Patrol prioritizes segments based on threat levels, land ownership, and geography, among other things. The U.S. Army Corps of Engineers (USACE) has been tasked with and reimbursed for the management of border wall system construction activities—including engineering support and assisting CBP with real estate acquisition. USACE, which is a federal agency within the Department of Defense (DOD), in turn, has awarded construction contracts. However, DHS reported that in fiscal year 2020, CBP began awarding some contracts in order to expedite the contracting process. CBP officials stated that land access and acquisition issues are significant challenges and could affect the Border Wall System Program's ability to meet its schedule goals.

The program develops acquisition program baselines (APB) for new segments as funding becomes available. As of September 2020, DHS leadership had approved two APBs for the program—for funding received in fiscal years 2018 and 2019—and CBP's Component Acquisition Executive had approved the program's preliminary APB associated with fiscal year 2020 funding. See the following pages for more information specific to the fiscal year 2018, 2019, and 2020 efforts.

The Border Wall System Program APBs do not account for related construction efforts that may limit oversight of the entire border wall system. For example, DOD has also provided support and funding for the construction of barriers and infrastructure along the southern border. Similar to CBP's Border Wall System Program activities, USACE manages construction activities for DOD-funded border wall projects. CBP officials told GAO that, although they provided a prioritized list of segments and construction standards to DOD, they have limited insight into DOD's planned efforts.

DHS leadership approved three key performance parameters (KPP) for the program—related to preventing unauthorized border crossings, resistance to thrown objects, and maintainability—that apply to all Border Wall System Program fiscal year segments. According to CBP, as segments of the border wall are constructed, USACE officials validate that the wall meets construction requirements.

Full border wall system capability is dependent on the development, integration, and testing of other technologies such as the Remote Video Surveillance System. In November 2017, DHS's Science and Technology Directorate's Office of Systems Engineering completed a technical assessment on the program and identified risks related to the integration and operation of enforcement zone technologies. These technology risks included cameras and sensors that had not been clearly defined or planned for within the wall system. The office made several recommendations, including that the program coordinate with an ongoing CBP study of land domain awareness capabilities, which DHS leadership directed CBP to conduct in October 2016 to inform a comprehensive border plan.

Officials from DHS's Test and Evaluation Division told GAO that the program will operationally test each segment of the border wall system once planned technologies within the wall system are deployed. However, in September 2020, CBP officials stated they are coordinating with stakeholders, including the program's operational test agent, to develop test plans and determine the extent of operational testing that is necessary.

PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of the Border Wall System Program assessments, which GAO has incorporated as appropriate.

BORDER WALL SYSTEM PROGRAM (FISCAL YEAR 2018)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

KEY FINDINGS

Program experienced a schedule breach in both the Rio Grande Valley and San Diego sectors in fiscal year 2020.

Fiscal year 2018 baseline was revised in June 2020 to remediate the schedule breach.

CBP officials reported continued schedule risks due to land acquisition issues in September 2020.

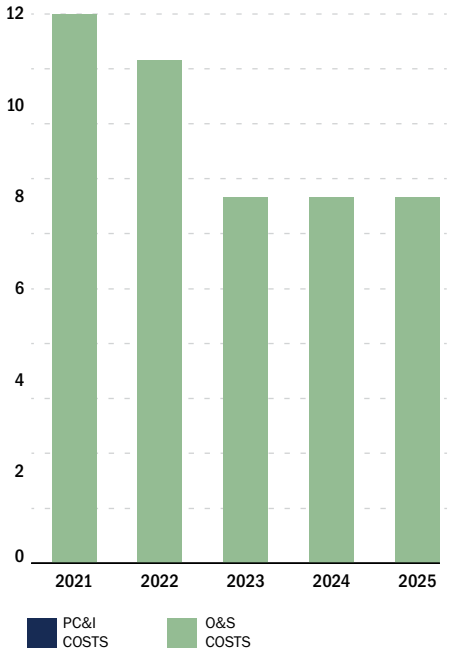
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (01/2018)	1,548	381	1,928
Current APB (06/2020)	1,660	556	2,216
Current estimate (02/2020)	1,351	347	1,699

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In January 2018, DHS approved an initial acquisition program baseline (APB) for the fiscal year 2018—establishing cost, schedule, and performance goals for 60 miles of barrier in the Rio Grande Valley (RGV). DHS subsequently modified the program's APB to incorporate cost, schedule, and performance goals for the replacement of an existing 14 miles of primary and secondary barriers in San Diego. The program's total APB cost increased by $417 million to over $2.3 billion.

In May 2019, CBP officials revised the program's fiscal year 2018 APB to refine cost goals because, in the 2018 and 2019 Consolidated Appropriations Acts, Congress prohibited the use of funds for construction in areas constituting about 4 miles in the RGV. As a result, the program's total cost threshold for these efforts decreased by $129 million to approximately $2.2 billion.

In November 2019, the program reported a schedule breach of its planned initial operational capability (IOC) date for the fiscal year 2018 RGV segment due to land acquisition issues. DHS leadership approved the program's revised fiscal year 2018 APB in June 2020 to remove the program from breach status. The program's IOC date for the RGV segment slipped to December 2020, more than a year later than previously planned.

In addition, the IOC date for the San Diego segment also slipped approximately 4 months, from December 2019 to March 2020. CBP officials also attribute this breach to land acquisition issues. Further, the program's revised APB reflects a reduction in replacement fencing in the San Diego segment from 14 to 11 miles. According to CBP officials, the reduction was made after CBP determined that the 3 miles were no longer needed to meet operational objectives. There were no changes to the cost goals in the program's revised APB as a result of these schedule slips.

In September 2020, CBP officials reported that the program continues to face land acquisition challenges in the RGV. These officials explained that, as a result of COVID-19, there have been challenges meeting with landowners. In addition, some courts are closed, which limits the ability to search county records and hold hearings related to land possession.

The fiscal year 2018 effort does not account for related construction efforts, which may limit oversight of the entire boarder wall system. For example, full operational capability for this segment is dependent on non-Border Wall System Program surveillance technologies, specifically the Linear Ground Detection System.

SCHEDULE

BORDER WALL SYSTEM PROGRAM (FISCAL YEAR 2019)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

KEY FINDINGS

Fiscal year 2019 baseline accounts for 53 miles of new border wall system in the Rio Grande Valley.

Program's full operational capability includes support structure for key technologies.

Current baseline does not account for over $6 billion in DOD border wall system construction efforts.

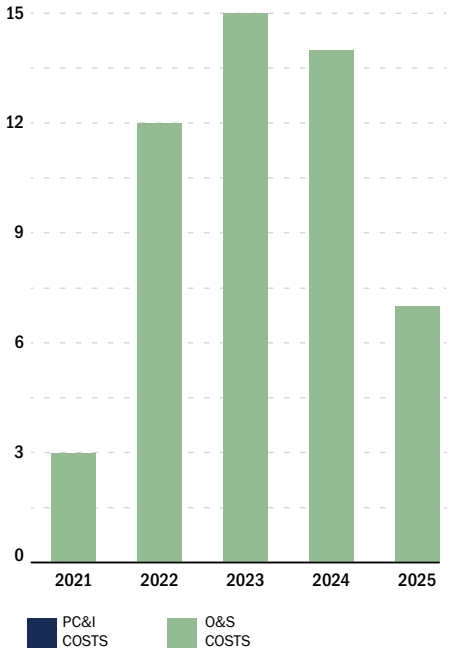
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (05/2019)	1,607	945	2,552
Current APB (05/2019)	1,607	945	2,552
Current estimate (04/2019)	1,398	821	2,219

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In May 2019, DHS leadership approved the program's initial acquisition program baseline (APB) for its fiscal year 2019 effort and granted acquisition decision event (ADE) 2A/B approval. The fiscal year 2019 APB established cost, schedule, and performance goals for an additional 53 miles of border wall system in the Rio Grande Valley (RGV) sector—including 11 miles of a new primary levee wall system.

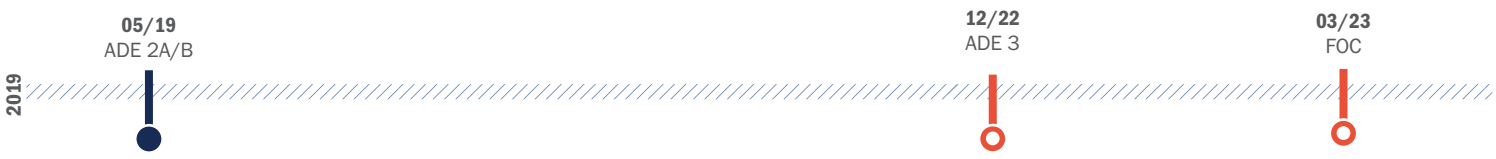
CBP officials plan to complete construction of the border barrier as well as provide interfaces for key surveillance technologies, such as the Remote Video Surveillance System and the Linear Ground Detection System, for this segment of the border wall system. The program plans to achieve full operational capability (FOC) of this segment, including integration of surveillance technologies into the border wall system, by March 2023.

In April 2019, the program developed a life-cycle cost estimate (LCCE) to inform its initial APB. However, at the time of the program's APB approval, the design for this segment was not yet approved, which could affect APB costs or schedule or both. As of September 2020, DHS officials said the program had not updated its LCCE to reflect contract awards or design changes. At that time, CBP officials told GAO that contracts were awarded for the construction of 32 of the 53 miles.

The Consolidated Appropriations Act, 2019, provided $1.375 billion for construction of primary fencing for the border wall system. CBP reported that approximately $604 million of this funding was used to address unfunded requirements from the program's fiscal year 2018 APB. The program also received nearly $601 million from the Treasury Forfeiture Fund in fiscal year 2019. The program anticipates an O&S affordability gap, which CBP officials plan to address by requesting additional funding in future years. In the meantime, the O&S costs will be covered by CBP's Tactical Infrastructure program.

The fiscal year 2019 APB does not account for related construction efforts in sectors other than RGV, for which the Department of Defense (DOD) provided a total of $6.1 billion in 2019. This DOD funding is planned to be used to construct over 300 miles of barriers across multiple sectors along the border. In fiscal year 2019, DHS requested that DOD assist with the construction of infrastructure in areas along the southern border other than the RGV sector. In response, DOD agreed to provide support and to use $2.5 billion of its fiscal year 2019 funds to support these efforts. Additionally, DOD provided $3.6 billion in fiscal year 2019 for the purpose of construction barriers necessary to support the use of the armed forces.

SCHEDULE



BORDER WALL SYSTEM PROGRAM (FISCAL YEAR 2020)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

KEY FINDINGS

Preliminary baseline for fiscal year 2020 established and program obtained ADE 2A approval in June 2020.

Fiscal year 2020 preliminary baseline accounts for 69 miles of new border wall system in the Laredo, Texas sector.

Baseline includes costs associated with support structure for border surveillance technologies.

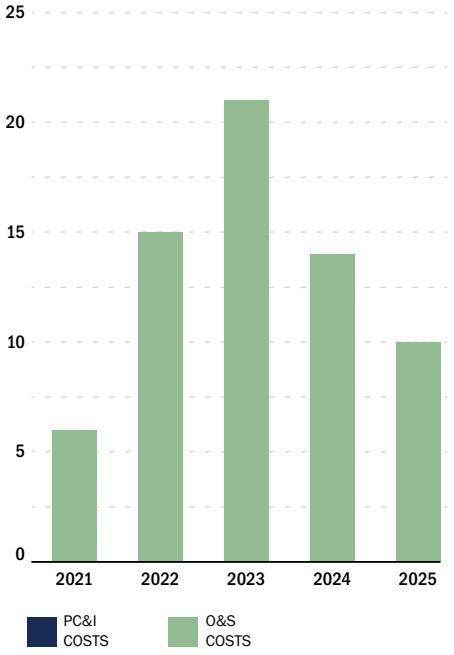
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Preliminary APB (06/2020)	1,611	476	2,088
Initial APB	Not yet approved		
Current estimate (03/2020)	1,401	414	1,815

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In April 2020, CBP's Component Acquisition Executive approved the program's preliminary acquisition program baseline (APB) for fiscal year 2020. This preliminary APB accounts for approximately 69 miles of new border wall system construction in the Laredo, Texas sector. DHS leadership subsequently granted the program's acquisition decision event (ADE) 2A for the project and authorized CBP to proceed with awarding contracts or the segment. CBP officials stated they plan to achieve ADE 2B and receive DHS leadership approval of the fiscal year 2020 APB by June 2021. As of September 2020, CBP officials stated contracts had been awarded for the construction of 31 miles of border wall system in the Laredo sector.

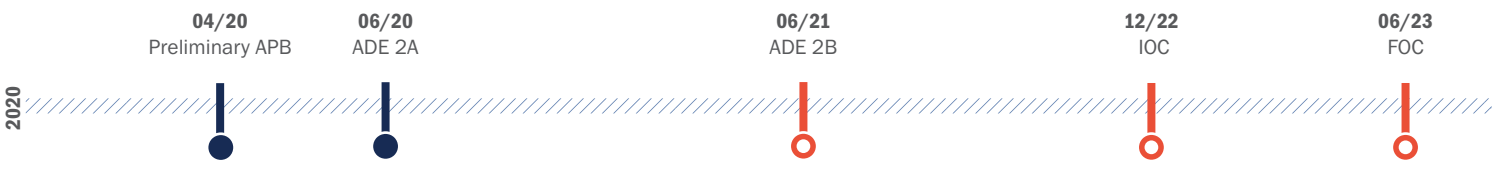
The program's preliminary estimate for completing the first mile of the barrier in the Laredo sector—initial operational capability (IOC)—is December 2022. Full operational capability (FOC) is planned for June 2023 and includes the completed construction of the 69 miles of barrier and interfaces for the Linear Ground Detection System (LGDS)—including short-range cameras, enforcement zone lighting, and electronics.

The program estimates that the costs associated with the 69 miles in the Laredo sector to be approximately $1.8 billion, which includes costs for land acquisition, environmental studies, construction of the barrier, and LGDS. In addition, the surveillance cameras for this segment, such as those deployed by the Remote Video Surveillance System program, will be funded by the Border Wall System Program. The Consolidated Appropriations Act, 2020 provided $1.375 billion for the construction of the border wall system. In addition, DHS leadership noted the program will have also have access to $100 million from the Treasury Forfeiture Funds as well as approximately $1 million budgeted for the LGDS program to use for these efforts. To address an O&S affordability gap, CBP officials plan to request additional funding in future years. In the meantime, the O&S costs will be covered by the Tactical Infrastructure program.

CBP plans to continue coordinating with the U.S. Army Corps of Engineers for engineering support and for awarding and overseeing the construction contracts. However, CBP is also overseeing a portion of the contract awards for the Laredo segment which CBP officials said are intended to expedite contracting efforts.

The Department of Defense (DOD) continued to fund the construction of infrastructure along the southern border. For fiscal year 2020 specifically, DOD transferred $3.8 billion from Defense and Overseas Contingency Operations appropriations for use by DOD to construct roads and barriers, and install lighting.

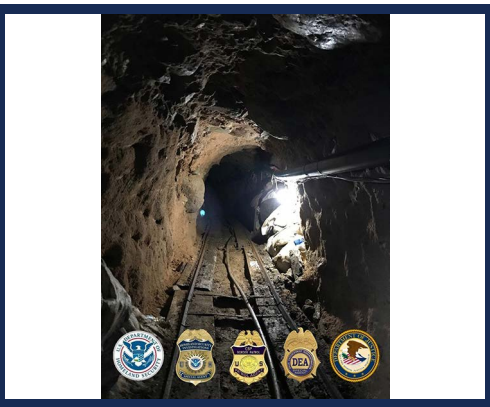
SCHEDULE



CROSS BORDER TUNNEL THREAT (CBTT)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

The CBTT program is intended to help CBP identify, acquire, and implement operational services and technologies necessary to obtain subterranean domain awareness along the U.S. land border. These technologies will help CBP address existing gaps in the prediction, detection, confirmation, investigation, and remediation of cross border tunnels.



Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

Program achieved ADE 2A for the Persistent Surveillance and Detection (PSD) segment.

ADE 2A approval allows the program to begin executing deployments to meet its initial operational capability.

CBTT is funded through IOC, but does not have a funding estimate for Segment 2 of PSD.

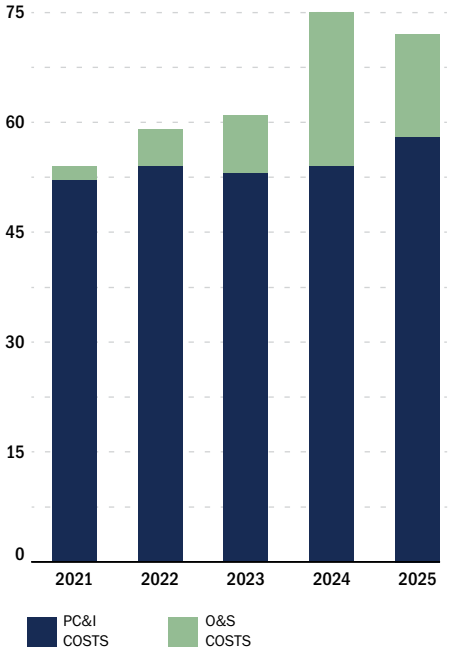
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Preliminary APB (12/2019)	690	1,245	1,935
Initial APB	Not yet approved		
Current estimate (06/2020)	604	1,088	1,692

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



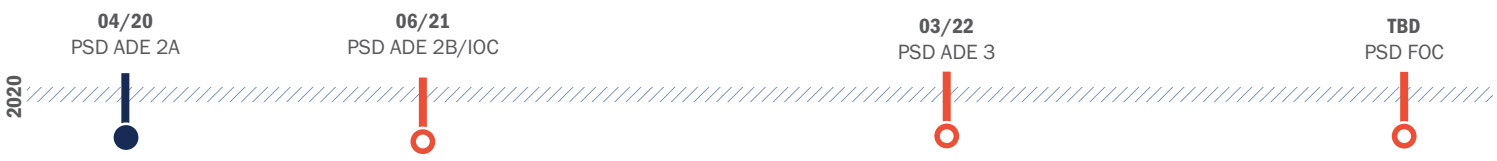
COST AND SCHEDULE

In April 2020, DHS leadership granted the CBTT program acquisition decision event (ADE) 2A approval of its tunnel detection capability—Persistent Surveillance and Detection (PSD). At that time, DHS leadership also authorized the deployment of PSD technologies along 6 miles of the southwest border for initial operational capability (IOC) and noted that further deployments of PSD capability will require acquisition documentation updates and DHS leadership approval. The program intends to use various PSD technologies to monitor subsurface activity and detect tunnels. Specifically, the program plans to provide fixed and mobile detection systems to provide tunnel detection in different geologic and topographic environments.

To inform the ADE 2A decision, the program developed a preliminary acquisition program baseline (APB), which outlines preliminary cost, schedule, and performance goals for deploying PSD technologies to nearly 100 miles of high-threat locations along the southwest border. The program plans to achieve IOC and request approval of ADE 2B—where the program will establish its initial DHS approved APB—by June 2021. CBP previously planned to deploy an IOC of 9 miles of PSD technologies, but it was decreased to 6 miles due to PC&I funding constraints. The program identified an O&S affordability gap of approximately $10 million in fiscal year 2024. CBP planned to upgrade the technologies deployed within the initial 6 miles in fiscal year 2024, but officials stated they can address the affordability gap by deferring these upgrades. According to CBP officials, the program will need additional PC&I funding for Segment 2 of PSD beginning in fiscal year 2022 to deploy PSD technologies to the approximately 94 remaining miles and achieve full operational capability (FOC). Officials explained that the program plans to tailor the deployment schedule and prioritize high-threat areas to align with available funding.

Going forward, CBP plans to use an incremental acquisition approach to address the other capability gaps, but as of June 2020, the program was still in the process of analyzing potential solutions to address the gaps. CBP officials previously explained that the incremental approach is necessary because the capability gaps the program intends to address are broader than one system can cover.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	IT/Mixed
Acquisition Level	1
IOC Miles	6
Total Miles	99.8

TEST EVENTS

Initial OT&E	August 2021

KEY FINDINGS

Program is at risk of not meeting KPPs, although baseline has not been set.

As of October 2020, program's test and evaluation master plan has not yet been approved.

Finding tunnels to conduct testing can be a challenge, but CBTT also uses simulated testing.

PROGRAM PERFORMANCE AND EXECUTION

OPERATIONAL TEST AGENT (OTA): LAND SYSTEMS OPERATIONAL TEST AUTHORITY

In October 2019, DHS's Joint Requirements Council (JRC) approved the program's operational requirements document. However, the JRC noted that although cybersecurity requirements were included at a high level, additional detail is needed to inform functional and system requirements and the program's test and evaluation master plan (TEMP). The JRC directed the program to (1) conduct cybersecurity threat assessments prior to ADE 2B to inform technical requirements and testing; and (2) conduct an integrated cross-border tunnel threat assessment to inform research and development of future tunnel detection technologies.

In its preliminary APB, the program established five key performance parameters (KPP) related to the PSD technologies' ability to detect and locate tunnels, reliability, and cyber resiliency. The program plans to procure and deploy commercial products and identified three vendors with potential detection systems for deployment within the initial 6 miles. According to CBP officials, contracts were awarded for procurements of these systems in March 2020. CBP officials reported that there is a significant risk that none of the vendors' solutions will meet all five of the program's KPPs. The program plans to evaluate the three detection systems to determine an appropriate deployment mix based on capabilities in various operating environments, geology, threat capabilities, and system characteristics. CBP officials stated that the mitigation strategy for systems not meeting all five KPPs will be determined after assessing upcoming test results. According to CBP officials, the program has initiated some testing activities, such as conducting cyber table top exercises for one of the vendor's systems, and plans to complete similar exercises with the other vendors.

As of October 2020, CBP officials had not yet completed the program's TEMP. Officials from DHS's Test and Evaluation Division stated that they coordinated with the program during the development of the TEMP because the program's technologies will be complex to test. Specifically, these officials noted that modeling and simulation will be necessary to test some of the technologies deployed—such as ground sensors—because the technology is intended to help CBP identify tunnels in areas where they are not known to exist. They explained that modeling and simulation offers the ability to test technologies in various regions and terrains without needing to physically locate a tunnel ahead of time to use for testing. CBP officials also stated that the initial deployments of detection systems are being made in locations with anticipated tunnel activity so technology can be tested in an operational environment before expanding beyond the authorized 6 miles of deployments. The program plans to begin initial operational test and evaluation (OT&E) on its detection systems in August 2021.

CBTT technologies are expected to operate 24 hours a day, seven days a week and notifications related to detections, system health, and performance are sent to CBP operators in remote locations. CBP plans to integrate CBTT technologies into its common operating picture when command and control facilities and interfaces are approved for use.

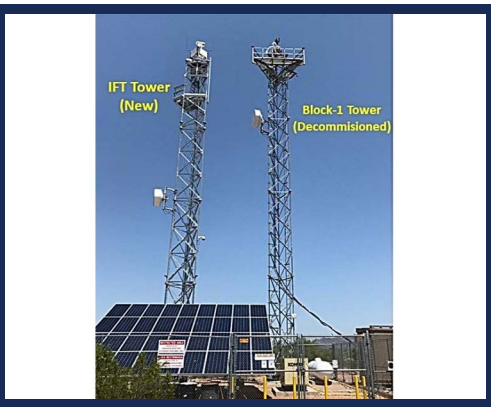
PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

INTEGRATED FIXED TOWERS (IFT)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

The IFT program helps the Border Patrol detect, track, identify, and classify illegal entries in remote areas. IFT consists of fixed surveillance tower systems equipped with ground surveillance radar, daylight and infrared cameras, and communications systems linking the towers to command and control centers. CBP plans to deliver or upgrade approximately 48 IFT systems across six areas of responsibility (AoR) in Arizona: Nogales, Douglas, Sonoita, Ajo, Tucson, and Casa Grande.



Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

Program re-baselined and schedule breach was resolved after a land-use resolution with Tohono O'odham Nation.

According to officials, the program faces schedule risks from road construction to access IFT locations and delayed deployments due to COVID-19.

Program requested a transfer of $18 million in O&S funds to PC&I funds.

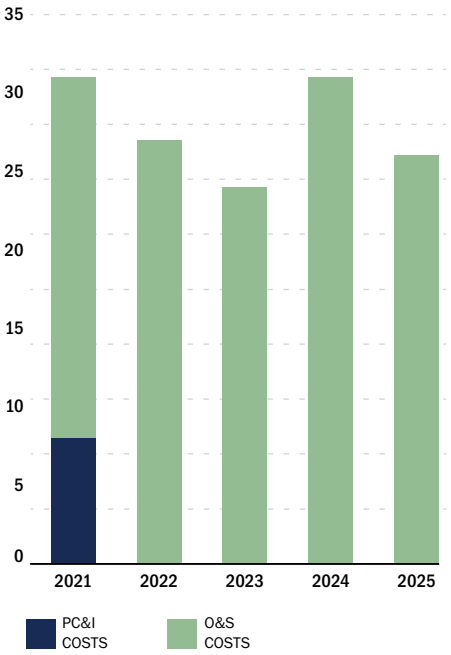
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (03/2012)	288	673	961
Current APB (10/2019)	341	408	749
Current estimate (07/2019)	269	382	651

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



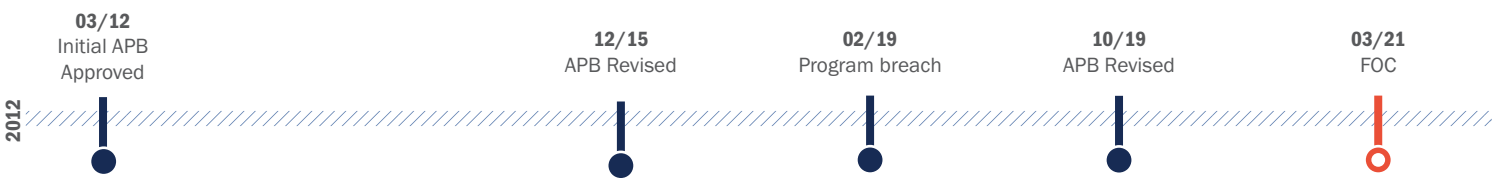
COST AND SCHEDULE

In October 2019, DHS leadership approved a revised acquisition program baseline (APB) for the IFT program, removing it from breach status. CBP declared a schedule breach of the program's APB in February 2019 as a result of delays in the negotiations with the Tohono O'odham Nation—a federally recognized Indian Tribe—regarding access to tribal lands to construct towers and deploy IFT systems in the Ajo and Casa Grande AoRs. In March 2019, CBP reached an agreement with the Nation for land access and as a result, the number of towers installed on tribal land has been reduced from 15 to 10. DHS leadership directed the program to revise its APB, life-cycle cost estimate (LCCE), and other acquisition documents, as necessary, to reflect agreement with the Nation and account for schedule delays.

CBP officials reported that the program is on track to achieve full operational capability (FOC) in March 2021, as outlined in the October 2019 APB, but also acknowledged the program still faces schedule challenges. According to CBP officials, the schedule for the construction of roads needed to access tower locations within the Tohono O'odham Nation slipped due to preservation of archaeological sites that were uncovered. CBP officials also said the road construction is overseen by a different division within CBP, which makes coordination complex and can affect the schedule. Further, the program reported delays in deployments and efforts to complete networking capability enhancements due, in part, to COVID-19. However, CBP officials stated that program officials and deployment contractors were taking steps to mitigate schedule risks.

In July 2020, CBP officials said the program was in the process of updating its LCCE to reflect program changes. Specifically, the program submitted a request to Congress to transfer $18 million from its O&S funds to its PC&I funds, which CBP officials stated was necessary to meet program objectives. According to CBP officials, the program plans to upgrade cameras at the Nogales and Douglas sites and cover unexpected costs associated with road construction with the additional PC&I funding. In addition, CBP plans to construct command and control centers that support multiple surveillance technologies under various acquisition programs, including IFT and Remote Video Surveillance System (RVSS). This effort is intended to integrate data from the various surveillance technologies.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	IT/MIXED
Acquisition Level	1
Areas of Responsibility	6
Total Towers	48
Total Camera-Only Towers	2
Total Command and Control Centers	6

KEY FINDINGS

IFT program continues to meet all three KPPs and to complete systems acceptance testing.

In April 2020, CBP conducted cyber resiliency testing but further cyber testing is delayed due to COVID-19.

CBP proposed to transition RVSS and IFT into one program by September 2021, which officials said will address deferred requirements.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): CBP OFFICE OF TECHNOLOGY INNOVATION AND ACQUISITION

According to CBP officials, the IFT program continues to meet all three of its key performance parameters (KPP), which establish a minimum acceptable range for detection and identification and time the system must operate. In October 2017, the contractor deployed IFT technology and completed system acceptance testing for the Sonoita AoR, where the program had high definition camera upgrades installed in an effort to optimize video capability. In June 2019, CBP officials told GAO they completed systems acceptance testing in the Tucson and Ajo AoRs and that contractors were able to minimize the effect of replacing equipment on end users and successfully resolved all system acceptance testing issues. According to CBP officials, IFT testing and acceptance occurs on an ongoing basis and the final systems acceptance test will be in the Casa Grande AoR.

In April 2020, CBP conducted a cyber tabletop exercise as part of IFT's efforts to address cyber resiliency. The program, in coordination with the OTA, planned some penetration testing, but these efforts were delayed due to COVID-19.

PROGRAM MANAGEMENT

According to CBP officials, the number of IFT towers deployed to a single AoR is subject to change based on Border Patrol assessments. Border Patrol was briefed and approved the reduction of towers within tribal lands. To mitigate capability gaps resulting from the tower reduction, Border Patrol requested the program deploy two additional IFT camera suites in the Ajo AoR.

In October 2016, DHS leadership directed CBP to develop a border technology plan that includes IFT capabilities. According to CBP officials, the plan calls for an additional 11 AoRs and 35 IFTs. In July 2020, CBP officials presented an effort to consolidate the approach of IFT, RVSS, Northern Border-Remote Video Surveillance System, and Autonomous Surveillance Towers to DHS leadership. CBP officials reported that this effort will address deployments in the additional AoRs and some of IFT's deferred operational requirements. This effort is intended to integrate all tower sites within an AoR into a common operating picture. These command and control centers are intended to support the different capabilities and configurations of separate surveillance systems into a single, consistent user interface. CBP officials stated that this will eliminate the need for separate sustainment activities for each program, among other things, which will result in efficiencies for end users and streamlined contracting opportunities. CBP would like to transition these existing programs under a new program in September 2021. CBP officials said that until the effort receives funding and the technologies are consolidated, the surveillance tower programs, including IFT, will continue deployment under the existing programs.

PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

MEDIUM LIFT HELICOPTER (UH-60)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

UH-60 is a medium-lift helicopter that CBP uses for law enforcement and border security operations, air and mobility support and transport, search and rescue, and other missions. CBP's UH-60 fleet consists of 20 aircraft acquired from the U.S. Army in three different models. CBP previously acquired four modern UH-60M aircraft and converted six of its 16 older UH-60A aircraft into more capable UH-60L models. CBP is replacing the remaining 10 UH-60A with reconfigured Army HH-60L aircraft.

Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

Program achieved ADE 3 in July 2018 and received approval to replace remaining UH-60A aircraft.

Officials reported a fleet mix study is underway to identify strategies to increase FOC quantity of UH-60s from 20 to 35.

Program plans to re-baseline with the increased number of aircraft by early fiscal year 2022.

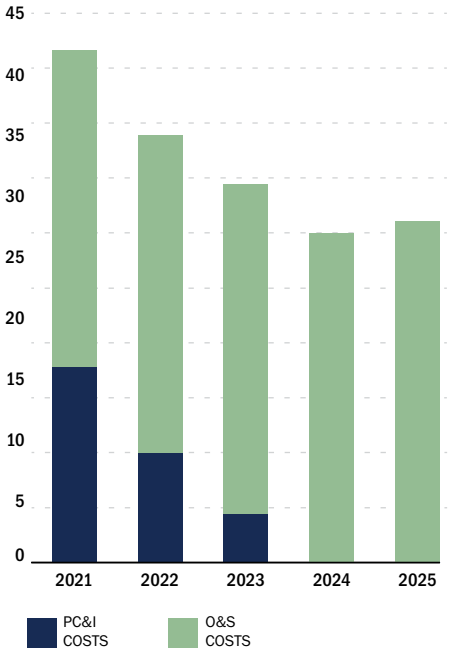
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (01/2016)	306	1,130	2,034
Current APB (06/2018)	403	1,116	1,519
Current estimate (06/2020)	376	1,067	1,444

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

In July 2018, DHS leadership granted approval for the program's acquisition decision event (ADE) 3 and the replacement of CBP's remaining UH-60A aircraft with reconfigured Army HH-60L aircraft on a one-to-one basis as those aircraft are delivered. DHS leadership previously approved the transfer of three reconfigured HH-60L aircraft from the Army. As of August 2020, the program has accepted delivery of three of these reconfigured aircraft. DHS leadership also directed CBP to address requirements for additional medium-lift capability beyond the scope of the program's acquisition program baseline (APB). CBP officials stated a desire to replace its other medium lift helicopters as they are retired from the fleet with additional reconfigured HH-60L aircraft. This would not increase the overall number of medium-lift helicopters but would increase the number of UH-60 aircraft.

In September 2019, the program revised its operational requirements document, which increased the full operational capability (FOC) quantity of medium lift helicopters from 20 to 35 aircraft. CBP officials stated that they are trying to determine the trade-offs related to capability and costs associated with keeping the UH-60As in the fleet or procuring additional aircraft. In the meantime, DHS leadership has relieved the program from returning the UH-60As to the Army as the UH-60Ls are delivered. According to CBP officials, the program is leveraging a federally funded research and development center to conduct a fleet mix study to inform decisions related to achieving the updated FOC quantity. The fleet mix study is expected to be completed by June 2021.

The program updated its life-cycle cost estimate (LCCE) in June 2020, which is within its APB cost thresholds. The updated cost estimate only reflects the costs of the 20 aircraft. CBP officials stated that the fleet mix study is needed to inform revisions to key acquisition documents, including the LCCE and APB. CBP officials anticipate updating these documents and plan to re-baseline the program to reflect the increase in aircraft by early fiscal year 2022.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Aircraft Quantity Approved in Current APB	Total of 20 (4 UH-60M, 6 former UH-60A which have been recapitalized into UH-60L, 10 former HH-60L which have been converted to UH-60L)

KEY FINDINGS

Program reported that deficiencies in the intercom system found during testing were resolved.

CBP does not plan to conduct formal OT&E on the reconfigured HH-60L.

DHS leadership directed CBP to address requirements for additional medium-lift capability.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): CBP AIR AND MARINE TEST AND EVALUATION DIVISION

CBP determined that the converted UH-60L and UH-60M aircraft met all five of the program's key performance parameters (KPP) through operational test and evaluation (OT&E) conducted in fiscal years 2012 and 2014. However, DHS's Director, Office of Test and Evaluation did not validate these results because UH-60 was not considered a major acquisition when the tests were conducted.

In January 2016, DHS leadership directed the program to conduct acceptance functional flight checks on a reconfigured HH-60L prototype prior to receiving approval to proceed with the remaining replacements. This testing concluded in February 2018. Testers rated the aircraft's performance, handling, and systems integration as excellent but found a deficiency in the intercom system. CBP officials stated that a minor design change resolved the issue. A retrofit was completed on the initial HH-60L and the design change will be implemented on subsequent aircraft. These officials also noted that they are coordinating with the Army to develop cyber resiliency requirements for the upgraded aircraft.

CBP does not plan to conduct formal OT&E on the reconfigured HH-60L because, according to CBP officials, the aircraft has minimal differences from the converted UH-60L aircraft that was previously tested. CBP officials also stated that the program has been able to leverage Army test data, which reduced the risk and testing costs associated with the program. CBP officials stated that additional testing was completed on the second and third reconfigured HH-60L and no operational deficiencies were identified. CBP officials also noted that pilots will perform additional inspections prior to accepting all future aircraft. According to CBP officials, the ADE 3 approval to replace the remaining seven aircraft was based on the evaluation of an initial reconfigured HH-60L, which was delivered in 2018.

PROGRAM MANAGEMENT

CBP plans to reduce the number of disparate aircraft types within its fleet, while increasing the capabilities of common platforms. Specifically, CBP intends to divest its less capable aircraft to maintain a more capable and common fleet of UH-60s, which CBP reported are the only medium-lift helicopters that fully meet capability requirements for their designated missions. Further, the common fleet of aircraft and mission system configurations will streamline logistics systems and standardize crew training.

CBP previously acquired UH-60 as a part of its Strategic Air and Marine Program (StAMP). In July 2016, DHS leadership designated UH-60 as a separate and distinct major acquisition program. In October 2018, CBP officials told GAO they continue to maintain a consolidated program office where the same staff from StAMP support all remaining acquisitions, including UH-60. CBP officials said they have refined the program's staffing profile and taken steps to mitigate the gap. For example, in July 2020, CBP officials said they had hired several new employees and established a memorandum of agreement with CBP's Office of Acquisition for matrixed support to assist with developing acquisition documents, as needed.

PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

MULTI-ROLE ENFORCEMENT AIRCRAFT (MEA)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

MEA are fixed-wing, multi-engine aircraft that can be configured to perform multiple missions including maritime, air, and land interdiction, as well as signals detection to support law enforcement. The maritime and air interdiction MEA are equipped with search radar and an electro-optical/infrared sensor to support maritime surveillance and airborne tracking missions. MEA will replace CBP's fleet of aging C-12, PA-42, and BE-20 aircraft.

Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

DHS leadership authorized full-rate production of air interdiction configuration in September 2019.

Program is meeting schedule goals, but officials said the program is at risk of schedule slips if funding for air interdiction aircraft is not identified.

Program received funding for land interdiction configuration in fiscal year 2020, but requirements are not fully developed to inform the procurement.

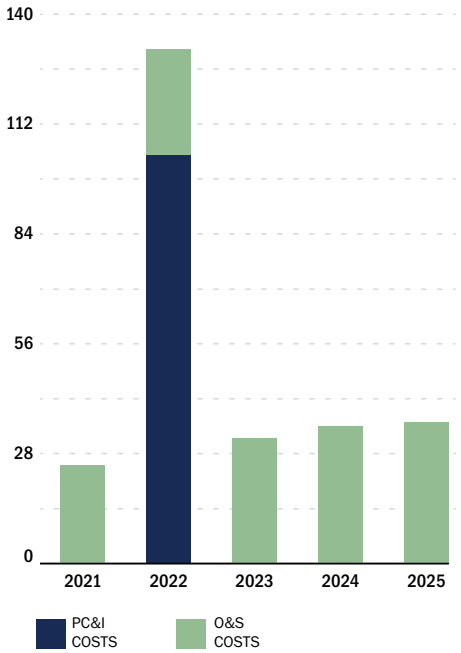
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (01/2016)	365	1,151	1,516
Current APB (02/2019)	741	1,584	2,325
Current estimate (06/2020)	669	1,185	1,854

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



COST AND SCHEDULE

The program's current acquisition program baseline (APB) supports procurement of 29 MEA: 16 maritime interdiction (MI) aircraft and 13 air interdiction (AI) aircraft. The program accepted delivery of the final MI aircraft in February 2019. In September 2019, DHS leadership granted the program acquisition decision event (ADE) 3 approval for the AI configuration—authorizing full-rate production.

Between 2017 and 2018, DHS leadership approved CBP's requests to procure a total of four MEAs in the AI configuration, which CBP officials said, have been delivered. The program received additional funding in fiscal year 2019 and procured three AI aircraft, which officials said are expected to be delivered in fiscal year 2021. In fiscal year 2020, congressional conferees noted $85.1 million in funding for the MEA program. In response, CBP officials said the program ordered two additional AI aircraft with anticipated delivery by March 2022. The fiscal year 2021 President's Budget request does not include funding for the program in fiscal year 2021. As of July 2020, the program has four more AI aircraft to procure in order to achieve full operational capability (FOC). CBP officials said the current contract for procuring the AI aircraft expires in fiscal year 2022 and the program needs to award the contract for the remaining four aircraft by March 2022 to avoid a schedule breach.

The Consolidated Appropriations Act, 2020 Explanatory Statement specified that $28.4 million of the $85.1 million is to be used for the procurement of a radar that will provide the primary capability for land interdiction (LI) aircraft. CBP officials said that based on preliminary cost estimates, the funding provided for LI MEA will not cover the full cost of a LI aircraft. They noted that the equipment for the LI configuration is expected to be more expensive than other configurations and the program has not yet defined requirements or established an APB for the LI configuration. CBP officials said they are expediting the acquisition process for the LI aircraft while concurrently assessing contract alternatives. The program updated its life-cycle cost estimate (LCCE) in June 2020, but this estimate does not include the preliminary costs for the addition of the LI aircraft. However, CBP officials plan to update its key acquisition documents to reflect the addition of the LI aircraft and achieve ADE 2A for LI, but were unsure when approval of the ADE 2A would occur.

SCHEDULE

PROGRAM INFORMATION

Acquisition Type	Non-IT
Acquisition Level	1
Maritime Interdiction MEA	16
Air Interdiction MEA	13

TEST EVENTS

Air interdiction follow-on OT&E	June 2019
Operational assessment and validation	July 2015
Initial OT&E	May 2013

KEY FINDINGS

Operational requirements document for land interdiction aircraft is in development.

CBP officials said the program is addressing recommendations following OT&E.

Program plans to address cyber resiliency requirements by September 2022.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): CBP AIR AND MARINE TEST AND EVALUATION DIVISION

In April 2016, CBP identified capability needs in three additional mission areas and proposed increasing the program's quantity to 38 MEA by adding 13 AI aircraft (reflected in the February 2019 APB), six LI aircraft, and three signals detection aircraft. The Joint Requirements Council (JRC) endorsed CBP's findings, but recommended CBP develop a number of requirements documents—including an operational requirements document (ORD)—to fully validate the findings. CBP officials stated that they are coordinating with stakeholders to develop an ORD for the LI aircraft and anticipate validation by the JRC by December 2020.

The program previously met all five of its key performance parameters (KPP) for the MI configuration. The program established two additional KPPs for the AI configuration related to radar detection. According to CBP officials, the only difference between the various configurations is the radar software. The MEA's new mission system processor was tested in July 2015 on the MI configuration.

The program initiated a two-phased follow-on operational test evaluation (OT&E) effort in May 2019. The program's OTA completed the first phase of follow-on OT&E in June 2019, which tested AI capabilities related to radar detection. During the first phase of follow-on OT&E, the program met the two AI KPPs. In August 2019, DHS's Director, Office of Test and Evaluation (DOT&E) assessed the results and found the AI radar software to be operationally effective but operationally suitable with limitations primarily because of a lack of spare parts, which affects the mission readiness of the MEA fleet. DOT&E recommended that the program develop a maintenance program to better track failure rates and project spare requirements, purchase spares at the level necessary to support the fleet, and complete OT&E of cyber resilience, among other things. In July 2020, CBP officials told GAO they were making progress in addressing DOT&E's recommendations. For example, these officials reported that CBP's Air and Marine Operations (AMO) is increasing the sparing levels of key equipment which will increase aircraft availability. They also explained that AMO is investing in a new logistics and maintenance tracking system, which is intended to improve AMO's ability to track and project equipment levels for the entire fleet.

The second phase of testing will assess cybersecurity. CBP officials stated that the program received approval to defer cyber resiliency testing because the OTA needed more time to develop a robust test plan. CBP officials said they have also coordinated with stakeholders and subject matter experts to begin the process of assessing cyber resiliency of the aircraft and plan to address cyber resiliency by September 2022.

PROGRAM MANAGEMENT

CBP previously acquired MEA as a part of its Strategic Air and Marine Program (StAMP). In July 2016, DHS leadership designated MEA as a separate and distinct major acquisition program. In October 2018, CBP officials told GAO they continue to maintain a consolidated program office where the same staff from StAMP support all remaining acquisitions, including MEA. CBP officials said they have refined the program's staffing profile and taken steps to mitigate gaps. For example, in July 2020, CBP officials said they had several new employees and are leveraging staff from other offices within CBP, as needed, to mitigate the gaps.

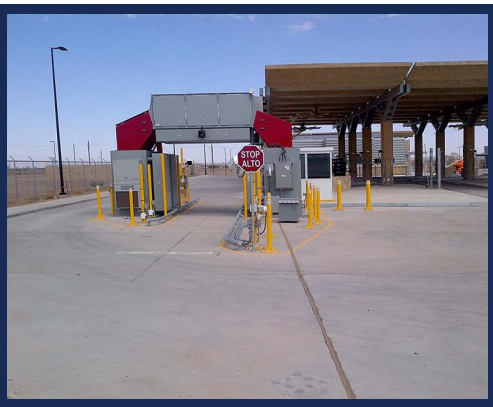
PROGRAM OFFICE COMMENTS

CBP officials reviewed a draft of this assessment and had no comments.

NON-INTRUSIVE INSPECTION (NII) SYSTEMS AND NII INTEGRATION PROGRAMS

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

The NII Systems program aims to provide an effective and non-destructive means to detect and prevent weapons of mass destruction, contraband, and illegal aliens from entering the U.S. while minimally affecting the flow of legitimate commerce. CBP uses large- and small-scale NII systems at air, sea, and land ports of entry to examine containers, railcars, vehicles, baggage, and mail. The NII Integration program is intended to help CBP address capability gaps with the current systems by integrating NII systems into CBP's network, among other things.



Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

CBP officials said they completed deployments of 342 NII large-scale systems in 2020.

NII Systems program is revising its baseline to reflect the procurement of additional systems and extended sustainment efforts.

NII Integration program achieved ADE 1 in November 2019.

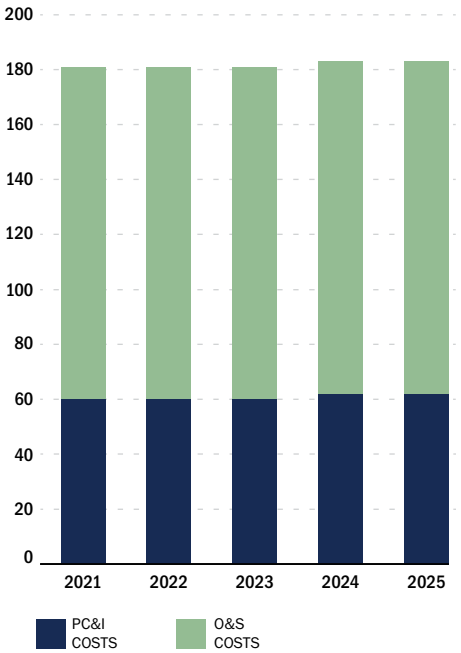
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB (01/2016)	1,896	2,616	4,512
Current APB (01/2016)	1,896	2,616	4,512
Current estimate (11/2019)	2,177	4,825	7,002

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



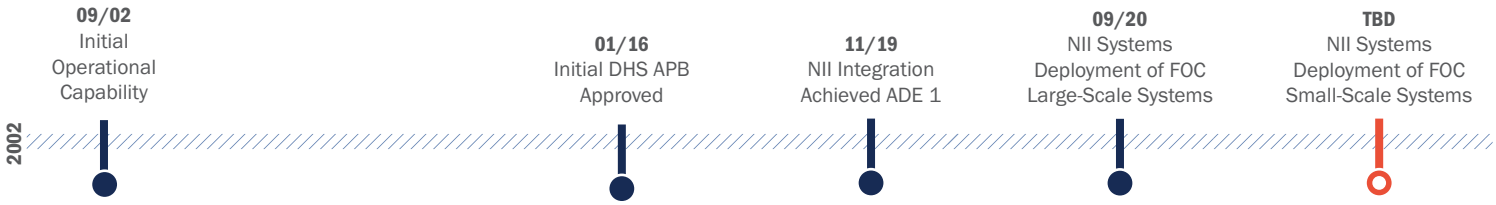
COST AND SCHEDULE

CBP officials reported that the NII Systems program completed deployment of its full operational capability (FOC) quantity of 342 large-scale NII systems in fiscal year 2020—approximately 4 years earlier than planned. In August 2020, CBP officials said they plan to continue to procure and deploy NII large-scale systems in excess of the FOC quantity based on available funding. The Consolidated Appropriations Act of 2019 included $570 million of PC&I funding for the NII program—$520 million above the President's budget request level. CBP officials stated they plan to use these funds to procure the additional NII systems as well as to support future integration efforts planned for the NII Integration program. The NII Systems program updated its life-cycle cost estimate in November 2019 to reflect the additional funding for the procurement of additional NII systems and to extend the program's sustainment efforts through 2035—9 years longer than the current acquisition program baseline (APB). As a result, the program's cost estimate increased by nearly $2.5 billion.

However, CBP officials stated the program does not plan to deploy its FOC quantity of 5,455 small-scale NII systems because requirements for small-scale systems have decreased since the program's APB was established in 2016. CBP officials said they were revising the program's key acquisition documents, including the APB, to reflect these changes.

In December 2019, DHS leadership approved acquisition decision event (ADE) 1 for the NII Integration program, which is intended to help CBP address capability gaps in the current NII Systems program. Specifically, the NII Integration program is intended to help CBP increase efficiency and effectiveness of non-intrusive inspection by connecting existing and future NII systems to CBP's network, integrating data, establishing common command centers, and providing imagery analysis tools, among other things. In June 2020, CBP officials stated they were coordinating with stakeholders to complete analysis and acquisition documentation to inform the NII Integration program's preliminary APB and ADE 2A, which is planned for the third quarter of fiscal year 2021. The NII Integration program plans to begin procurement efforts in fiscal year 2022.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	NII Systems Program: IT NII Integration: IT/Mixed
Acquisition Level of Both Programs	1
NII Systems Program FOC Quantities	342 Large-scale tsystems 5,455 Small-scale systems

KEY FINDINGS

CBP officials reported that NII Systems program is meeting its KPPs.

CBP is evaluating technologies to inform NII Integration program efforts.

Staffing challenges pose risk to NII Systems and NII Integration programs.

PERFORMANCE AND EXECUTION

According to CBP officials, the NII Systems program is currently meeting its three program level key performance parameters (KPP). NII systems are commercial-off-the-shelf products and, for this reason, DHS leadership decided that the program does not need a test and evaluation master plan. In addition, DHS's Test and Evaluation Division has not independently validated CBP's assertion that it met its KPPs.

CBP officials said that as a result of travel restrictions associated with COVID-19, the program experienced some delays in deploying NII systems. Specifically, deployment team members were unable to travel to some ports of entry, which limited CBP's ability to conduct systems acceptance testing required for system deployment. In August 2020, CBP officials stated that they have resumed systems acceptance testing and deployment delays have been minimal.

CBP plans to address several capability gaps in the current NII Systems program through the follow-on program—the NII Integration program. CBP officials are coordinating with DHS's Science and Technology Directorate to evaluate technologies and concepts of operation to inform the future acquisitions and anticipate analysis alternatives to be approved in November 2020. CBP is planning for an incremental acquisition approach for the NII Integration program, which will align to each operational environment—establishing baselines for land, sea, and air solutions. According to CBP officials, the NII Integration program is able to leverage current NII Systems program contracts for some initial program efforts.

The NII Systems program continues to face staffing gaps and NII System program staff are also supporting the NII Integration program. In the interim, the program is mitigating risks to program execution as a result of the staffing gaps with government personnel from other offices within CBP, such as the Office of Acquisition, and leverages contracted staff when possible. However, the NII Systems program staff are also supporting efforts of the NII Integration program. According to officials, the program is working to address staffing shortfalls and initiate hiring actions.

PROGRAM OFFICE COMMENTS

CBP officials provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

REMOTE VIDEO SURVEILLANCE SYSTEM (RVSS)

U.S. CUSTOMS AND BORDER PROTECTION (CBP)

RVSS helps the Border Patrol detect, track, identify, and classify illegal entries across U.S. borders. RVSS consists of daylight and infrared video cameras mounted on fixed towers and buildings with communications systems that link to command and control centers. From 1995 to 2005, CBP deployed approximately 310 RVSS towers along the U.S. northern and southern borders, and initiated efforts to upgrade legacy RVSS towers in Arizona in 2011.

Source: Customs and Border Protection. | GAO-21-175

KEY FINDINGS

Program was elevated to a Level 1 program in April 2016 but does not yet have an approved baseline.

DHS leadership determined the program has deployed systems beyond the parameters authorized.

Program received approval to procure long-lead materials while acquisition documents are being finalized.

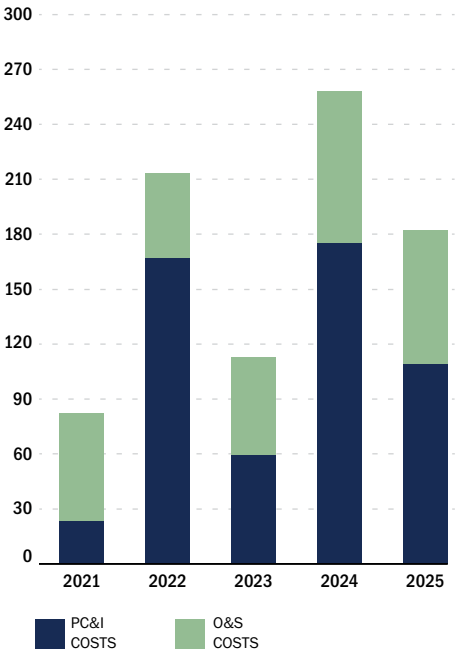
APB THRESHOLDS VS. CURRENT ESTIMATE

DOLLARS IN MILLIONS

	PC&I COST	O&S COST	LIFE-CYCLE COST
Initial APB	Not yet approved		
Current APB	Not yet approved		
Current estimate (06/2020)	1,892	1,805	3,698

PROGRAM COSTS FOR FISCAL YEARS 2021-2025

DOLLARS IN MILLIONS



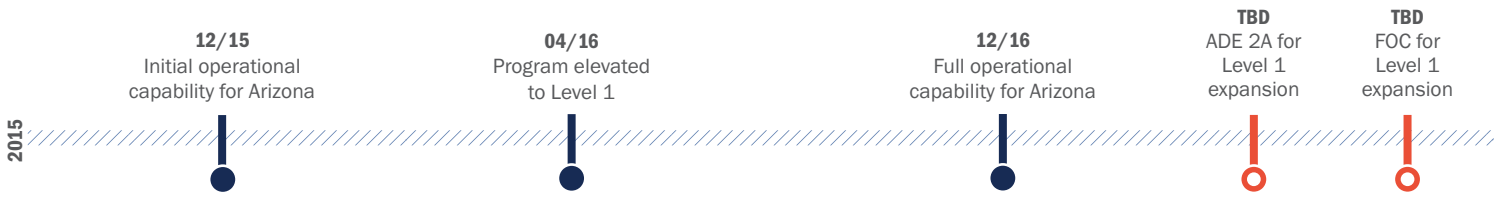
COST AND SCHEDULE

In April 2016, DHS leadership elevated RVSS from a level 3 program—which focused on upgrading legacy RVSS in Arizona—to a level 1 program after approving CBP's plan to expand deployments to the Rio Grande Valley (RGV) sector and adding an additional six sectors along the southwest border—Laredo (LRT), Del Rio, Big Bend, El Paso, El Centro, and San Diego. In addition, DHS leadership approved additional deployment to two RGV stations; however it required the program to revise its acquisition program baseline (APB), conduct an acquisition decision event (ADE) 2A to account for its expanded scope, and obtain approval for additional deployments.

In June 2019, the program submitted a draft of the revised APB to DHS leadership for review and it was determined that the program deployed systems beyond the parameters of what DHS leadership authorized in April 2016. The program is in the process of revising key acquisition documents such as the program's life-cycle cost estimate and APB to address the additional deployments, but as of October 2020 these documents were not yet approved. CBP officials told GAO that as of October 2020, 45 of the 83 planned fixed and relocatable systems have been deployed in the RGV sector and they expect to complete the effort by June 2021. In addition, as part of an authorized Border Patrol pilot program, seven relocatable towers were deployed in the LRT sector and one in the San Diego sector.

In March 2020, DHS leadership authorized the CBP to procure long-lead materials for RVSS while key acquisition documents are being finalized. This included authorization to procure real estate for new tower sites in three U.S. Border Patrol Station areas of responsibility. Officials reported that granting approval for long-lead materials, such as RVSS units with cameras and laser illuminators, will help mitigate potential schedule delays. According to DHS leadership, the risk associated with authorizing the procurement of long-lead material is low, because even if CBP is unable to obtain approval for full deployment to the RGV and LRT sectors, the materials can be used for other Border Patrol systems.

SCHEDULE



PROGRAM INFORMATION

Acquisition Type	IT/Mixed
Acquisition Level	1
Towers Deployed in Arizona Sector	65
Towers Deployed in RGV Sector	41
Towers Deployed In San Diego Sector	1
Towers Deployed in Laredo sector	7

KEY FINDINGS

Program has initiated the deployment of solar power capability for relocatable towers.

According to CBP officials, COVID-19 has led to land acquisition delays.

DHS plans to transition RVSS and IFT into one program by September 2021.

PERFORMANCE AND TESTING

OPERATIONAL TEST AGENT (OTA): CBP OFFICE OF TECHNOLOGY INNOVATION AND ACQUISITION

According to CBP officials, RVSS towers deployed in Arizona met the program's three key performance parameters (KPP), which establish a minimum acceptable range for detection and identification, and the percentage of time the system must be available to operators. CBP officials said these KPPs will apply to future towers, but the program does not plan to conduct additional testing unless there are major technological changes.

Previously, program officials reported performance issues with five relocatable RVSS towers deployed in June 2018, which used diesel generators that caused significant vibrations in the cameras. Officials reported that the program has initiated the deployment of solar power capability for relocatable towers and is adding video stabilization to towers. CBP officials said they are considering ways to remotely monitor system health and fuel levels of the generators, which would enable operators to conduct maintenance on an as-needed basis.

According to CBP, the operational requirements of the program have not changed and the same camera configurations are being deployed in the additional deployment locations. However, DHS leadership directed the program to update its operational requirements document to address the additional deployment locations, but CBP officials said that as of July 2020, the document had not been approved.

PROGRAM MANAGEMENT

In July 2020, CBP officials presented an effort to consolidate the approach of RVSS, Integrated Fixed Towers (IFT), Northern Border-Remote Video Surveillance System, and Autonomous Surveillance Towers to DHS leadership. CBP anticipates that this effort will include requirements for integration into a common operating picture, which is intended to support the different capabilities and configurations of separate surveillance systems into a single, consistent user interface. CBP officials stated that this will eliminate the need for separate sustainment activities for each program, among other things, which will result in cost savings and efficiencies for end users. CBP intends to simultaneously transition existing programs under a new program in September 2021. CBP officials said that until the consolidated effort is funded and the technologies are consolidated, the surveillance tower programs, including RVSS, will continue deployment under the existing programs.

CBP officials reported that travel restrictions and social distancing requirements related to COVID-19 have resulted in delays related to land acquisition due to limited access to courthouses to conduct title searches. Additionally, although the contractor has been able to continue deploying towers, CBP officials anticipate delays in deployment are possible if restrictions related to COVID-19 continue or worsen.

PROGRAM OFFICE COMMENTS

CBP provided technical comments on a draft of this assessment, which GAO incorporated as appropriate.

Appendix II: Objectives, Scope, and Methodology

The objectives of this audit were designed to provide congressional committees insight into the Department of Homeland Security's (DHS) major acquisition programs. We assessed the extent to which (1) DHS's major acquisition programs are meeting their baseline goals, (2) DHS's guidance for developing acquisition documentation is consistent with its acquisition policy, and (3) DHS is reporting relevant information to Congress on its portfolio of major acquisition programs.

To address these questions, we selected 31 of DHS's 43 major acquisition programs.[1] We selected 14 of DHS's Level 1 acquisition programs—those with life-cycle cost estimates (LCCE) of $1 billion or more—that had at least one project, increment, or segment in the Obtain phase—the stage in the acquisition life cycle when programs develop, test, and evaluate systems—at the initiation of our audit. Additionally, we reviewed 17 other major acquisition programs—including 11 Level 1 or Level 2 programs that either had not yet entered or were beyond the Obtain phase, and six Level 2 programs that have LCCEs between $300 million and less than $1 billion—that we identified were at risk of not meeting their cost estimates, schedules, or capability requirements based on our past work and discussions with DHS officials. We subsequently determined one program, the Advanced Wireless Services program, which is to pilot the department's new rapid acquisition process, was delayed in reaching key milestones and we removed it from the scope of this review. We met with representatives from DHS's Office of Program Accountability and Risk Management (PARM)—DHS's main body for acquisition oversight—as a part of our scoping effort to determine which programs, if any, were facing difficulties in meeting their cost estimates, schedules, or capability requirements. The 30 selected programs were sponsored by eight different components, and they are identified in table 6, along with our rationale for selecting them.

[1]Our review included 24 of the 29 programs we reviewed in GAO, *Homeland Security Acquisitions: Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals*, GAO-20-170SP (Washington, D.C.: Dec. 19, 2019).

Table 6: Rationale for Selecting DHS Major Acquisition Programs for Review

Component	Program	Level 1 program in the Obtain phase at the initiation of our audit	Level 1 and Level 2 programs identified to be at risk[b]
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	●	—
	National Cybersecurity Protection System	●	—
	Next Generation Networks - Priority Services Phase 1[a]	—	●
	Next Generation Networks - Priority Services Phase 2[a]	—	●
DHS Management Directorate	Homeland Advanced Recognition Technology	●	—
Federal Emergency Management Agency	Grants Management Modernization [a]	—	●
Science and Technology Directorate	National Bio and Agro-Defense Facility	●	—
Transportation Security Administration	Checkpoint Property Screening System	●	—
	Credential Authentication Technology [a]	—	●
	Electronic Baggage Screening Program	—	●
U.S. Citizenship and Immigration Services	Transformation	●	—
U.S. Coast Guard	270’ Medium Endurance Cutter Service Life Extension Program	—	●
	Fast Response Cutter	—	●
	H-65 Conversion/Sustainment Program	—	●
	Long Range Surveillance Aircraft (HC-130H/J)	—	●
	Medium Range Recovery Helicopter	—	●
	Medium Range Surveillance Aircraft (HC-144A & C-27J)	●	—
	National Security Cutter	—	●
	Offshore Patrol Cutter	●	—
	Polar Security Cutter	●	—
U.S. Customs and Border Protection	Automated Commercial Environment	●	—
	Biometric Entry-Exit Program	●	—
	Border Wall System Program	●	—
	Cross-Border Tunnel Threat	—	●
	Integrated Fixed Towers[a]	—	●
	Medium Lift Helicopter	●	—
	Multi-Role Enforcement Aircraft	●	—
	Non-Intrusive Inspection Systems Program	—	●

Component	Program	Level 1 program in the Obtain phase at the initiation of our audit	Level 1 and Level 2 programs identified to be at risk[b]
	Non-Intrusive Inspection Integration Program	—	●
	Remote Video Surveillance System	—	●

Legend: ● = yes; — = no; shaded rows = new program reviewed in 2020.

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-21-175

[a]Level 2 program.

[b]Programs in this column are either Level 2 programs in the Obtain phase or Level 1 and 2 program that had not yet entered or were beyond the Obtain phase that we identified were at risk of not meeting their cost estimates, schedules, or capability requirements based on our past work and discussions with DHS officials.

To determine the extent to which DHS's major acquisition programs are meeting their schedule and cost goals, we collected key acquisition documentation for each of the 30 programs, such as all LCCEs and acquisition program baselines (APB) approved at the department level since DHS's current acquisition management policy went into effect in November 2008. DHS policy establishes that all major acquisition programs should have a department-approved APB—which establishes a program's critical cost, schedule, and performance parameters, at ADE 2B. Twenty-four of the 30 programs had one or more department-approved LCCEs and APBs between November 2008 and September 30, 2020.[2] We used these APBs to establish the initial and current cost and schedule goals for the programs. We then developed a data collection instrument to help validate the information from the APBs. Specifically, for each program, we pre-populated data collection instruments to the extent possible with the schedule and cost information we had obtained from the APBs and our prior assessments (if applicable) to identify schedule and cost goal changes, if any, during fiscal year 2020. We shared our data collection instruments with officials from the program offices to confirm or correct our initial analysis and to collect additional information to enhance the timeliness and comprehensiveness of our data sets. We also reviewed the Future Years Homeland Security Program report to Congress for fiscal years 2021-2025, which presents 5-year funding plans for each of DHS's major acquisition programs. However, we determined

[2]The remaining six programs—Cross-Border Tunnel Threat, Non-Intrusive Inspection Systems Integration, Remote Video Surveillance System, Next Generation Networks – Priority Services Phase 2, Checkpoint Property Screening System, and Medium Range Recovery Helicopter—did not receive department approval of their initial APBs by September 30, 2020. Therefore, we excluded them from our assessment of whether programs are on track to meet their schedule and cost goals during fiscal year 2020.

that information collected from programs was more current and suitable for our purposes. We then met with program officials to identify causes and effects associated with any identified schedule and cost goal changes, including changes as a result of the Coronavirus Disease 2019 pandemic. Subsequently, we drafted preliminary assessments for each program. When drafting these assessments, we combined the Non-Intrusive Inspection Systems Program with the Non-Intrusive Inspection Integration program because the Non-Intrusive Inspection Integration program is a follow-on effort that has not yet established a preliminary APs. Similarly, we combined the Next Generation Networks - Priority Services Phase 1 and 2 programs because the Phase 2 program is a follow-on effort that has not yet established a preliminary APB. In addition, we drafted three assessments for the Border Wall System Program—one for each of fiscal years 2018, 2019, and 2020—because the program established acquisition program baselines for each fiscal year that funding was provided. After drafting the assessments, we shared them with program and component officials, and gave these officials an opportunity to submit comments to help us correct any inaccuracies, which we accounted for as appropriate (such as when new information was available).

To determine the extent to which DHS's guidance for developing acquisition documentation is consistent with acquisition policy, we reviewed DHS's acquisition management instruction and compared it to supplemental guidance provided by DHS's Lines of Business. We focused our review on 10 of the headquarters-approved documents.[3] We determined when DHS's acquisition management instruction initially required each acquisition document or required an update for each document. We compared our findings to the requirements identified in supplemental guidance for each document to determine if the supplemental guidance was in alignment with the acquisition management instruction. To verify our findings and plans to address issues found, we subsequently interviewed relevant DHS officials.

To determine the extent to which DHS is reporting relevant information to Congress on its portfolio of major acquisition programs, we reviewed the

[3]We reviewed the guidance for the following nine headquarters-approved documents: acquisition plans, acquisition program baselines, analysis of alternatives study plans, capability development plans, integrated logistics support plans, life-cycle cost estimates, mission needs statements, operational requirements documents, systems engineering life cycle tailoring plans, and technology assessments.

briefing request contained in the Joint Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2019.[4] We then reviewed documentation DHS provided to the appropriations committees, such as briefing slides, and the underlying documentation that was used to develop them, such as the Acquisition Program Health Assessment. Additionally, we met with PARM officials who developed the briefings provided to Congress. We also interviewed congressional staff from the Homeland Security Subcommittees for both the Senate and House Committee on Appropriations to discuss the information they receive from DHS to determine if the information being provided was sufficient to meet the needs of the committees in their oversight roles.

We conducted this performance audit from January 2020 to January 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to 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.

[4]The DHS Chief Acquisition Officer has been directed to provide quarterly briefings on summary ratings for all Level 1 and Level 2 acquisition programs to appropriations committees. H. R. Rep. No. 116-9, at 473 (Feb. 13, 2019) (Conf. Rep.), accompanying Consolidated Appropriations Act, 2019 (H.J. Res. 31), Pub. L. No. 116-6, 133 Stat. 13; H.R. Rep. No. 115-948, at 12 (Sept. 12, 2018).

Appendix III: Comments from the Department of Homeland Security

U.S. Department of Homeland Security
Washington, DC 20528

Homeland Security

December 17, 2020

Marie A. Mak
Director, Contracting and National Security Acquisitions
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Management Response to Draft Report GAO-21-175, "DHS ANNUAL ASSESSMENT: Most Acquisition Programs Are Meeting Goals but Data Provided to Congress Lacks Context Needed for Effective Oversight"

Dear Ms. Mak:

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

DHS is pleased to note GAO's recognition that the Department's major acquisition programs are generally meeting cost, schedule, and performance goals. This year was more challenging than most, and DHS also appreciates GAO's acknowledgement of (1) challenges the programs faced due to COVID-19 pandemic, and (2) that DHS leadership is helping programs affected by the pandemic by allowing them to delay their schedule baseline goals by up to six months to alleviate the effects of the pandemic. DHS remains committed to supporting the Components as they navigate these challenges and working together to best manage the risks these programs face.

The draft report contained one recommendation with which the Department concurs. Attached find our detailed response to the recommendation. DHS previously submitted technical comments addressing several accuracy and contextual issues under a separate cover for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H CRUMPACKER

Digitally signed by JIM H CRUMPACKER
Date: 2020.12.17 13:38:07 -05'00'

JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Attachment

2

Attachment: Management Response to Recommendation Contained in GAO-21-175

GAO recommended that the Secretary of DHS:

Recommendation 1: Ensure that the Under Secretary for Management ensure the requirements for establishing key acquisition documentation in the acquisition management instruction and Systems Engineering Life Cycle Instruction and Guidebook align, to include requirements for the systems engineering life cycle tailoring plans.

Response: Concur. The Management Directorate's Office of Program Accountability and Risk Management (PARM) is in the final stages of updating and aligning the Systems Engineering Lifecycle (SELC) Instruction, 102-01-103, dated November 2015, and Guidebook 102-01-103-01, dated April 2016 with the Acquisition Management Instruction, 102-01-001 Rev01.2, dated August 2020. GAO previously made two prior recommendations to DHS related to the SELC Instruction and Guidebook[1], and the Department believes that the issues identified in this current report will be addressed through the actions already being taken to address those prior recommendations.

Specifically, addressing the prior recommendations required an extensive rewrite of the SELC Instruction in order to re-structure and streamline the SELC policy. This revision includes changes to align SELC activities, as well as acquisition program documentation, to the acquisition lifecycle framework's acquisition decision event (ADE) gates, as established in the Acquisition Management Instruction. All necessary SELC policy realignments recommended in this report will be accomplished via the SELC Instruction update.

Additionally, PARM is authoring a minor revision of the Acquisition Management Instruction, 102-01-001, dated August 2020, to state that the SELC Tailoring Plan be required prior to ADE-2A, and updated as necessary at subsequent milestones. This revision will also correct typographical errors and other minor edits.

Estimated Completion Date: September 30, 2021.

[1] See GAO-17-346SP, "HOMELAND SECURITY ACQUISITIONS: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress," dated April 2017; and GAO-20-170SP, "HOMELAND SECURITY ACQUISITIONS: Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals," dated December 2019.

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Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact listed above, Rick Cederholm (Assistant Director), Alexis Olson (Analyst-in-Charge), Kerry Burgott, Andrea Evans, Natalie Logan, Bonita J.P. Oden, and Charlie Shivers III made key contributions to this report. Other contributors included Mathew Bader, Erin Butkowski, John Crawford, Alexandra Dew Silva, Lorraine Ettaro, Alexandra Gebhard, Betsy Gregory-Hosler, Stephanie Gustafson, Claire Li, Shannin O'Neill, Ashley Rawson, Anne Louise Taylor, and Robin Wilson.

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