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NASA'S SECURITY MANAGEMENT PRACTICES

October 21, 2019

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RESULTS IN BRIEF

NASA's Security Management Practices

NASA Office of Inspector General
Office of Audits

October 21, 2019

IG-20-001 (A-18-003-00)

WHY WE PERFORMED THIS AUDIT

NASA is home to numerous irreplaceable assets that support space flight, aeronautics missions, and planetary research. These resources include one-of-a-kind space flight hardware, astronaut training facilities, planetary samples, assembly buildings, specialized aircraft, wind tunnels, launch pads, specialized research laboratories, pyrotechnic and munitions materials, and simulation facilities. These assets, coupled with NASA's high-profile mission and extensive physical footprint, make its facilities an attractive target for those who wish to do harm to the Agency. The NASA Office of Protective Services (OPS) and Center Protective Services Offices (PSO) are responsible for securing NASA employees, contractors, and guests along with Agency assets under a decentralized, Center-based model. Protective services functions at NASA include physical security, personnel security, secure access procedures, intelligence analysis, counterintelligence and counterterrorism, handling of sensitive and classified information, firefighting, aircraft rescue, ambulance services, and emergency management.

In this audit, we assessed the effectiveness of NASA's management of its security operations—specifically, physical security, law enforcement, and fire services operations—across the Agency. We reviewed the protective services organizational structure at the Agency and Center levels, decision making authority within those structures, day-to-day operations, funding, and contract oversight. We also interviewed NASA and Center protective services, emergency management, and fire services staff, and visited the [REDACTED]. In addition, we reviewed a planned Agency-wide reorganization of security services as part of NASA's Mission Support Future Architecture Program (MAP) to centralize management of security operations at an enterprise level that was to be implemented beginning in October 2019.

WHAT WE FOUND

While overall security policy and oversight are managed by OPS at the Agency level, implementation and funding of protective services operations remains a responsibility of Center leadership who used their resources to pursue Center-based priorities. As a result, OPS authority is marginalized and Centers, at times, develop and implement strategies that conflict with the intent of Agency directives. As part of MAP, OPS was to assume funding and day-to-day operational responsibility for protective services across the Agency. However, in August 2019 NASA changed its plans to centralize management of the physical security portion of the Agency's protective services operations and as of the time of this report the impact of this decision on the Agency's overall approach to security management remains unclear. Despite our concerns that OPS was not well positioned to manage such a change because it currently lacks an organizational or governance structure to implement and oversee such enterprise-level responsibilities, we do believe several planned initiatives, if properly implemented, could leverage economies of scale and improve protective services operations.

In addition, we found that managers at the [REDACTED] Centers we visited made security staffing and infrastructure protection decisions based primarily on current and projected budget allocations rather than an assessment of critical security threats or risks, an approach that while understandable is contradictory with federal and NASA requirements. Moreover, because the Assistant Administrator (AA) for OPS does not control Center-based security funding, we found that OPS

could only recommend that Center Directors perform corrective actions to mitigate deficiencies identified in Center functional reviews and facility security assessments, and the results were not always used to inform decision making.

We also found the current Center-focused operational structure for OPS has resulted in an inconsistent application of a wide range of security practices across the Centers, including federal arrest authority, legislative jurisdiction, firearms policy, and fire services. Federal arrest authority allows authorized NASA security personnel to arrest an individual without a warrant for any offense against the United States committed in their presence, yet not every Center allows security personnel to make arrests despite standardization efforts across the Agency. NASA Centers also operate under a jurisdictional mix of federal, state, and/or local authorities. While some Centers fall under a single jurisdiction, others are covered by multiple jurisdictions. As a result, implementation of security policies and the responsibilities of security personnel vary across the Agency and has resulted in confusion, hesitation, and uncertainty among local law enforcement and protective services personnel. In addition, while NASA policy describes the authority, requirements, and training necessary for protective services personnel to carry firearms, it fails to articulate an Agency-wide standard for arming these civil servants. Consequently, this decision is left to the discretion of each Center and has led to differences across the Agency regarding whether Center personnel are authorized to carry firearms. Similarly, responsibility and authority over fire services is fragmented as fire services report to the protective services organization at some Centers while others are managed by the Center's safety and mission assurance organization, resulting in unclear and inconsistent lines of authority, conflicting interpretations of standards and policies, and Centers not meeting National Fire Protection Association staffing and equipment standards.

Finally, at Centers with substantial tenant populations, PSOs are challenged by increasing workloads and shifting policing responsibilities coupled with a lack of funding proportionate to the increased services provided to tenants. NASA has entered into lease agreements that authorize the use of underutilized real property at its Centers to outside organizations, and revenues received from those agreements may be used to cover Center costs related to those leases. However, the Agency has no standard for determining the cost of providing protective services to tenants and therefore Centers use differing methods to calculate such costs. Furthermore, although Center PSOs are required to maintain oversight of all Center security activities, they are not consistently involved in assessing the level of effort, costs, or personnel demands necessitated by tenants' use of NASA properties.

WHAT WE RECOMMENDED

To improve NASA's security management across the Agency, we recommended the AA for OPS: (1) establish and implement an enterprise-level governance structure and fund applicable countermeasures to mitigate or formally accept risk; (2) standardize and streamline the facility security assessment process across the Agency; (3) research federal arrest authority in conjunction with the Office of the General Counsel, formulate a unified response, and implement a consistent policy across the Agency; (4) evaluate Agency-wide jurisdictions to determine if it is feasible for all Centers to be under the same jurisdiction or at least if individual Centers should have all of their property under the same type of jurisdiction; (5) coordinate with the Office of the General Counsel to standardize the carrying of firearms by NASA civil servants in an Agency-wide policy while also addressing the appropriate situations when NASA contractors may carry their government-issued weapons off NASA property; (6) in collaboration with the Office of Safety and Mission Assurance, evaluate fire services policies and functions Agency-wide, reconcile duties and responsibilities, and determine whether these responsibilities should reside under protective services or safety and mission; (7) establish an Agency-wide policy on calculating protective services costs associated with tenant reimbursable expenses; and (8) develop procedures that require Center protective services officials to be a stakeholder in the planning process to meet protective services requirements for existing and new tenants.

We provided a draft of this report to NASA management who concurred with the recommendations and described planned actions to address them. We consider the proposed actions responsive to our recommendations and will close the recommendations upon completion and verification of the proposed actions.

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Acronyms

AA	Assistant Administrator
AA&E	Arms, Ammunition, and Explosives
AMO	Agency Management and Operations
BSA	Business Services Assessment
CIO	Chief Information Officer
CMO	Center Management and Operations
DHS	Department of Homeland Security
EPACS	Electronic Physical Access Control System
EUL	enhanced-use lease
IDIQ	indefinite-delivery, indefinite-quantity
IT	information technology
MAP	Mission Support Future Architecture Program
MSC	Mission Support Council
NCI	NASA Critical Infrastructure
NFPA	National Fire Protection Association
NPR	NASA Procedural Requirements
OCIO	Office of the Chief Information Officer
OGC	Office of the General Counsel
OIG	Office of Inspector General
OPS	Office of Protective Services
PSO	Protective Services Office

INTRODUCTION

The federal government requires a secure environment to protect its facilities, provide for the safety of its employees and the public, and maintain essential functions. For the past several years, the Government Accountability Office has reported that the federal government faces significant challenges protecting its facilities from potential attacks and deems management of federal property a high risk.¹ For its part, NASA’s high-profile mission and extensive physical footprint in multiple venues make its facilities an attractive target for those who wish to do harm to the Agency.² Ensuring the continuous operation of NASA and its missions; the protection of its property and equipment; and the safety of the employees, contractors, and members of the public who enter NASA facilities on a daily basis is an essential Agency responsibility.

In previous audits, we questioned whether NASA assets were adequately identified and protected and whether Agency policies and controls were properly aligned with federal requirements and current threats.³ Furthermore, in one review more than a decade ago we found that Center management relied primarily on budget allocations rather than threat assessments when making security decisions and that physical security controls for critical infrastructure did not meet Agency requirements.⁴

We initiated this audit to assess the effectiveness of NASA’s management of its security operations—specifically, physical security, law enforcement, and fire services operations—across the Agency.⁵ We reviewed the protective services organizational structure at the Agency and Center levels, decision making authority and responsibility within those structures, day-to-day operations, funding, and contract oversight. We also reviewed preparations for a planned Agency-wide reorganization to centralize management of security operations and move from an individual Center-based focus to enterprise level-based system security management. However, in August 2019 as we were completing this audit NASA abruptly stepped back from its plans to centralize management of the physical security portion of the Agency’s protective services operations. Given the recency of this decision, NASA security officials had not determined by early September the impact of this decision on the Agency’s overall approach to security management.

¹ Government Accountability Office, *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others* (GAO-17-317, February 15, 2017).

² NASA consists of a Headquarters office in Washington, D.C.; nine geographically dispersed Centers; the Jet Propulsion Laboratory, which is a federally funded research and development center operated under contract by the California Institute of Technology; and nine component facilities and testing sites such as the Katherine Johnson Independent Verification and Validation Facility and White Sands Test Facility.

³ NASA Office of Inspector General (OIG), *Industrial Control System Security within NASA’s Critical and Supporting Infrastructure* (IG-17-011, February 8, 2017) and *NASA’s Management of the Near Earth Network* (IG-16-014, March 17, 2016).

⁴ NASA OIG, *Center’s Security Program Needed Improvement* (IG-08-025, September 19, 2008).

⁵ NASA protective services also encompasses intelligence, counterintelligence, counterterrorism, continuity of operations, communications security, classified information security, identity and credential management, electronic access management, and insider threat programs—all of which were outside the scope of this audit.

As part of our audit, we visited [REDACTED] NASA Centers—[REDACTED]—to obtain information from a cross section of Centers with differing missions and related physical infrastructure, protective services contract values, and tenant activity. See Appendix A for details on the audit’s scope and methodology.

Background

NASA’s protective services offices are responsible for securing NASA employees, contractors, and guests along with NASA assets that include facilities, property, data, and information under a decentralized, Center-based model. NASA Centers and component facilities contain over 3,200 buildings on more than 100,000 acres.⁶ NASA’s workforce includes 17,300 civil service personnel and approximately 60,000 contract employees. In addition, the Agency’s facilities host approximately 4 million visitors annually. Protective services functions at NASA include physical security, personnel security, secure access procedures, 911 dispatch, firefighting, aircraft rescue, ambulance services, and emergency management with many of these operations highly dependent on location.

NASA is home to numerous irreplaceable assets that support space flight, aeronautics missions, and planetary research. These resources include one-of-a-kind space flight hardware, astronaut training facilities, planetary samples, assembly buildings, specialized aircraft, wind tunnels, launch pads, specialized research laboratories, pyrotechnic and munitions materials, and simulation facilities. Such Agency assets require differing levels of protection depending upon their criticality. For example, the [REDACTED] Centers we visited for this review house a variety of distinctive assets with varying security requirements.

- [REDACTED]
- [REDACTED]
- [REDACTED]

⁶ Component facilities are NASA installations geographically separated from the NASA Centers to which they are assigned.

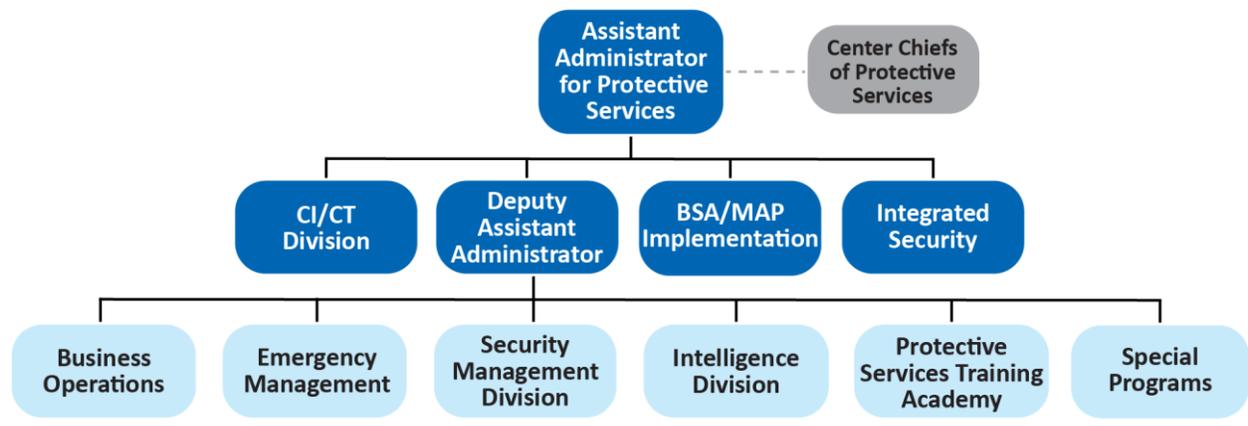
[REDACTED]

- [REDACTED]

Protective Services Organizational Structure

NASA Headquarters Office of Protective Services (OPS), along with the Center Protective Services Offices (PSO), are responsible for the safety and protection of Agency personnel and assets. The Assistant Administrator for Protective Services (referred to as the AA for OPS) is responsible for policy formulation, oversight, coordination, and management of security, including Agency-wide personnel, physical, and information security policy; intelligence analysis; counterintelligence and counterterrorism services; national security systems; handling of sensitive and classified information; identity, credential, and systems access management; emergency management; and continuity of operations functions. The AA for OPS is also NASA’s Insider Threat Senior Official (see Figure 1).

Figure 1: NASA Office of Protective Services Organizational Structure



Source: NASA Office of Inspector General (OIG) presentation of Headquarters OPS information.

Note: Counterintelligence/Counterterrorism (CI/CT), Business Services Assessment (BSA), and Mission Support Future Architecture Program (MAP). Center Chiefs of Protective Services report to their respective Center Director. The Security Management Division includes the following four offices: (1) Personnel Security, (2) Declassification, (3) Industrial Security Information Assurance, and (4) Enterprise Physical Access Control Systems/Identity, Credential, and Access Management Services.

The AA for OPS has a wide variety of responsibilities including:⁷

- Overseeing implementation of NASA’s security program by providing executive management and policy direction, ensuring that adequate resources are identified and committed to accomplish the office’s security mission.
- Ensuring NASA security programs are appropriately configured, properly staffed, and adequately funded to enable each NASA Center to efficiently manage day-to-day security operations, and

⁷ NASA Procedural Requirements (NPR) 1600.1A, *NASA Security Program Procedural Requirements* (August 12, 2013).

serving as both the Agency Risk Acceptance Authority for all NASA security programs and the NASA Critical Infrastructure (NCI) Assurance Officer. NASA regulations define critical infrastructure as “those essential facilities, missions, services, equipment, and interdependencies that enable the Agency to fulfill its national goals and Agency essential missions.” NCI may include information technology (IT) resources, communications, command and control capabilities, government-owned flight or experimental flight vehicles, the International Space Station, and other one-of-a-kind irreplaceable facilities. The AA for OPS approves all Center proposals for additions and deletions to the NCI inventory list.

While each NASA Center has a PSO, responsibility for Center security rests with the Center Director. Specifically, the Center Director is responsible for establishing, funding, and maintaining a comprehensive security program under the direction of the Center’s Chief of Protective Services (Center Chief). Center Chiefs report directly to their Center Director and are responsible for fiscal oversight and the day-to-day management of their respective Center’s security and law enforcement operations.⁸ Under authority delegated from the AA for OPS, the Center Chief serves as the principal advisor and authority to the Center Director in all matters related to the Center Security Program, including budget requirements and recommended improvements, while the Center Director makes all final decisions. Unlike most of the Centers’ Office of the Chief Information Officer (OCIO) or Office of the Chief Financial Officer, the PSO is not an independent office at the Center. Rather, it resides within a larger office or directorate, in most cases a Center Operations Directorate. While Center Chiefs may report directly to the Center Director in emergency situations, they typically communicate routine issues through Center Operations Directorate management.

For the past 2 years, NASA’s protective services offices were preparing for a significant reorganization as part of the Agency’s Mission Support Future Architecture Program (MAP). The goal of the MAP process was to realign mission support budget authority and lines of reporting to share capabilities across Centers rather than sustaining business and mission support operations individually at each Center. Through the MAP initiative, NASA planned to transform all mission support services including IT, legal support, and protective services to an enterprise-level operating model. Once the MAP process was complete, Center protective services staff were to report to the AA for OPS at NASA Headquarters and OPS funding was to move from Center budgets to an Agency-wide budget under the authority of the AA. Although NASA was scheduled to begin this transition in October 2019, in August 2019 NASA’s Mission Support Council (MSC)—the Agency’s senior decision-making body—revised the MAP approach so that Center Directors will retain authority for physical security at their individual Centers. However, security funding will be allocated to OPS and then to each Center. The MSC intends to discuss the details of this revised approach at its planned September meeting.

With a few minor exceptions, the type of protective services provided by Center PSOs is consistent across all Centers (e.g., some PSOs are responsible for fire protection and emergency management while others are not). However, the PSO organizational structure, authority, and workloads may differ widely due to factors such as Center-specific operations and senior leadership priorities, Center employee and contractor population, geographic location, criminal jurisdiction, number of buildings and facilities located at the Center, and tenant population.

⁸ While the Center Chiefs do not report directly to the AA for OPS, they work with the AA and his staff as needed.

NASA employs approximately 1,605 protective services personnel across the Agency— [REDACTED] —of which 128 are civil servants and the remainder are contractor employees. The number of personnel and the ratio of contractor to civil servants varies from Center to Center, with a high of 284 security personnel at [REDACTED] 271 of whom are contractor personnel, and a low of 57 security personnel at [REDACTED], 50 of whom are contractors. The variations are primarily due to organizational structure and workload requirements, which are driven by Center population, mission, geographic location, and tenant population. Since 2010, protective services staffing across the Agency has lost 21 civil service and 58 contractor positions with these personnel reductions attributed to reduced funding for protective services and leadership focused on funding other priorities. Additionally, NASA data indicates that approximately 40 percent of the civil servant security personnel are eligible for retirement within the next 5 years.⁹

NASA funds protective services across the Agency through three main sources: Center Management and Operations/Agency Management and Operations (CMO/AMO) funds, programmatic funds, and reimbursable funds. In fiscal year 2017, NASA's total security budget was just under \$150 million, which was funded as follows:

- *\$125 million in CMO/AMO funds.* CMO generally funds management, operations, and maintenance of NASA Centers and associated component facilities. For protective services, CMO pays for protective services contracts, equipment, and civil servant salaries. AMO funds the management and oversight of Agency programs and performance of NASA-wide mission support activities. These funds support Headquarters OPS and the NASA Protective Services Training Academy contract.
- *\$10 million in programmatic funds.* Program funds are derived from a Mission Directorate or Mission Support Office. These organizations fund protective services to support specific tasks related to their mission or project, such as extra security patrols during launches and planning and protection details for VIP visits.
- *\$14 million in reimbursable funds.* Reimbursable work is performed by NASA on behalf of an internal or external organization for which NASA's costs are reimbursed. For protective services, reimbursable funds are generated as a result of services provided to commercial partners such as launch support, escorting payloads, and badging.

Center PSOs employ contractors to conduct most day-to-day protective services operations. In total across NASA, 44 contracts (10 prime contracts and 34 subcontracts and task orders) are dedicated to protective services with contractors utilizing a mixture of government-provided and contractor equipment. Table 1 lists the protective services contracts for the [REDACTED] Centers we visited.

⁹ NASA Business Services Assessment Protective Services Core Team, *Protective Services Business Services Assessment* (February 2018).

Table 1: Protective Services Contracts [REDACTED]

Center	Contractor	Contract Description
[REDACTED]	[REDACTED]	A hybrid firm-fixed-price/cost contract [REDACTED]. The potential period of performance is 5 years, consisting of a 1-year base period and four 1-year options. If all options are exercised, the contract has a maximum potential value of \$148.1 million. The contract consists of a firm-fixed-price core; firm-fixed-price indefinite-delivery, indefinite-quantity (IDIQ); and cost IDIQ requirements.
[REDACTED]	[REDACTED]	A firm-fixed-price contract [REDACTED]. The potential period of performance is 5 years, consisting of a 2-year base period, one 2-year option, and one 1-year option. If all options are exercised, the contract has a maximum potential value of \$33.4 million. The contract consists of firm-fixed-price core and firm-fixed-price IDIQ requirements.
[REDACTED]	[REDACTED]	A firm-fixed-price contract [REDACTED]. The potential period of performance is 6.5 years, consisting of a 2-year base period, three 1-year options, two 6-month extensions, and three 2-month options. If all options are exercised, the contract has a maximum potential value of \$97.2 million. The contract consists of firm-fixed-price core and firm-fixed-price IDIQ requirements.
[REDACTED]	[REDACTED]	A hybrid firm-fixed-price/cost contract [REDACTED]. The potential period of performance is 5 years, consisting of a 1-year base period and four 1-year options. If all options are exercised, the contract has a maximum potential value of \$154.6 million. The contract consists of firm-fixed-price core, firm-fixed-price IDIQ, and cost IDIQ requirements.

Source: NASA OIG review of Center contract file documentation.

Note: Cost-reimbursement contracts provide for payment of allowable incurred costs to the extent prescribed in the contract. Firm-fixed-price contracts provide for a price not subject to adjustment on the basis of the contractor's actual costs in performing the contract. This contract type places maximum risk on the contractor and full responsibility for all costs and resulting profit or loss. IDIQ contracts provide for an indefinite quantity of services for a fixed time and are used when precise quantities of supplies or services the government will require during the contract period cannot be readily determined. The government places delivery orders (for supplies) or task orders (for services) against a basic contract for individual requirements.

Agency Capability Reviews

In 2014, NASA established Business Services Assessments (BSA) to examine key capabilities across the Agency such as IT, procurement, human capital, budget management, and facilities management. BSA teams conducted their evaluations by interviewing stakeholders, reviewing audits and regulations, benchmarking external organizations, and performing a detailed assessment of internal operations. Recommendations from the BSAs were presented to the MSC who, after review, instructed the business areas to create implementation plans detailing how the adopted recommendations would be implemented.

In 2017, NASA initiated a BSA of the Agency's protective services and identified five areas for in-depth analysis: (1) Background Investigation Adjudication, (2) Identity Credentialing and Access Management, (3) National Security, (4) Training, and (5) Organizational Structure. The MSC received the BSA's findings and observations in May 2018 and, based on that input, made seven key decisions regarding:

- structure and organization of Agency OPS and Center PSOs,
- emergency management and fire services,
- funding for unique services,
- jurisdictional and arrest authority,
- PSO civil service firearm carry authority,
- personnel security adjudication, and
- electronic physical access.¹⁰

The MSC tasked Headquarters OPS with developing an implementation plan detailing how key decisions in each of these areas will be accomplished. In October 2018, OPS requested and the MSC approved an initiative to incorporate all BSA recommendations and findings into the Protective Services MAP Project Plan. As noted previously, NASA's plan to centralize security management at Headquarters was recently revised so that Center Directors will retain authority for physical security at their Centers.

¹⁰ See Appendix B for a full description of the BSA's seven key decisions.

DISPARATE CENTER PRIORITIES CHALLENGE EFFORTS TO IMPLEMENT ENTERPRISE-LEVEL APPROACHES TO SECURITY MANAGEMENT

While overall security policy and oversight priorities are set at the Agency level, implementation and funding of protective services operations has historically been a responsibility of Center Directors who have used their resources to pursue Center-based priorities. Moreover, while NASA's plan to move physical security to an enterprise-level undertaking was revised in August 2019, OPS was not well positioned to manage such a change because it lacks an organizational or governance structure to implement and oversee such enterprise-level changes. We also found leadership at all █████ Centers we visited made security staffing and infrastructure protection decisions based primarily on current and projected funding instead of threat or risk assessments, an approach that while understandable is contradictory with federal and NASA requirements.¹¹ Because the AA for OPS does not control Center-based security funding, we found that OPS could only recommend that Center Directors perform corrective actions to mitigate deficiencies. Finally, the current decentralized, Center-focused operational structure for OPS has resulted in an inconsistent application of a wide range of practices across the Centers, including federal arrest authority, legislative jurisdiction, and firearms policy.¹² In order to effectively implement enterprise-level security programs across the Agency, NASA needs to address the disparate implementation of OPS policies and procedures at the Centers whether it moves physical security to an enterprise-level approach to security management or retains its current Center-based system.

Security as an Enterprise Service

The AA for OPS is responsible for the management, implementation, and maintenance of the NASA Security Program. Under MAP, the plan was for Headquarters OPS to assume funding and day-to-day operational responsibility for protective services across the Agency. However, OPS does not currently have a structure in place to evaluate risk, set priorities, or solicit input from Center program management to inform its decision making. An analysis completed during the Agency's 2018 BSA concluded that the decentralized protective services organizational structure is not aligned with Agency priorities and, as a result, Centers develop and implement strategies that at times conflict with the intent of Agency directives.

¹¹ Department of Homeland Security (DHS), *The Risk Management Process for Federal Facilities: An Interagency Security Committee Standard*, 2nd Edition (November 2016); NPR 1600.1A; and NPR 1620.3A, *Physical Security Requirements for NASA Facilities and Property* (October 4, 2012).

¹² Legislative jurisdiction, hereafter simply "jurisdiction," refers to the entity with authority to legislate and exercise executive and judicial powers within a specified geographic area.

Our concerns about NASA’s ability to transition some or all of its protective services to an enterprise-level approach are based on the Agency’s poor history with similar efforts to reorganize and gain efficiencies in operations, which have been slow to take shape and resulted in only limited success. For example, NASA’s Technical Capabilities Assessment Team and the subsequent Capability Leadership Model reviewed the investment, consolidation, and elimination of Agency technical capabilities in light of current and future mission requirements. Yet, in March 2017 we reported that after more than 4 years the Agency had not made many concrete decisions about its technical capabilities.¹³ At that time, we cautioned that NASA’s reorganization efforts would need to address long-standing challenges associated with the Agency’s federated governance model and lack of institutionalized processes. Also in October 2017, we reported that in the 3 years since completion of the IT BSA, the Chief Information Officer (CIO) had made insufficient progress due to a decentralized management structure, lack of insight into Agency-wide IT spending, and the CIO’s limited authority—in spite of the OCIO’s relatively robust governance structure.¹⁴ We have similar concerns with the Agency’s plans to reorganize security management authority and operations into a headquarters-based, enterprise-level function.

To this point, in August 2019, 2 months before the protective services organization was to begin transitioning to an enterprise service, the MSC reversed course and directed that Center management retain authority over “physical security” services at their Centers. According to OPS leadership, this decision was made without their input or representation at the decisive meeting. These officials said the details of the MSC’s decision remain unclear as well as the decision’s impact on the overall MAP effort. As other examples throughout this report illustrate—specifically in areas such as funding, arrest authority, and firearms—the Agency’s decentralized organizational structure marginalizes the authority of the AA for OPS furthering the need for a governance structure to manage any enterprise-level protective services functions.

In contrast to the OCIO, OPS does not currently have an organizational or governance structure in place to leverage opportunities to evaluate risk from an Agency perspective. Even with its challenges moving to an enterprise-service model, within the OCIO governance structure are three high-level boards designed to allow Headquarters to gain an Agency-wide perspective on IT-related decisions. The boards are comprised of senior managers at Headquarters and the Centers, where they are able to gather information on resource management, requirements identification, risk strategies, and stakeholder issues, as well as provide oversight and evaluation of IT programs and evaluations. The OPS organization does not have similar boards, or any formal organization or governance structure in place that would facilitate communication between Headquarters and Center officials in order to inform Agency-level decision makers on protective services issues. In fact, OPS representatives we interviewed did not believe such a formal governance structure was needed.

Implementing a decision-making board structure, similar to the CIO’s that engages program, Center, and OPS management, is critical to facilitate the prioritization of risks and inform decision making from an Agency perspective. These boards could serve as a forum for raising a variety of security issues, including when security funding is needed for a priority that may fall outside OPS contracts, such as facility improvements and equipment needs. As enterprise risk management principles explain and our

¹³ NASA OIG, *NASA’s Efforts to “Rightsize” its Workforce, Facilities, and Other Supporting Assets* (IG-17-015, March 21, 2017).

¹⁴ NASA OIG, *NASA’s Efforts to Improve the Agency’s Information Technology Governance* (IG-18-002, October 19, 2017).

previous audit work has shown, the identification and mitigation of risks and the centralization of Agency services require a strong governance structure for the enterprise operating model to be effective.¹⁵

Identifying all protective services funding is also a vital step in the realignment process that likely will prove challenging for OPS given that the majority of funding decisions have historically resided at the Center level. Each Center management makes tradeoffs and balances priorities to allocate funding among its organizations. Currently, PSOs use a majority of the money they receive from the Centers to fund the security contracts, and additional funds to mitigate security risks are paid either by Center operation or programmatic funds depending on the organization that controls the facility or function. It is unclear whether these additional funds will be included in the OPS budget. Furthermore, these types of funds have not been tracked at the Agency level and therefore OPS does not know exactly how much each Center spends for these services. For example, even though the majority of a Center's protective services funding is allocated to the security contract, Centers often use other money, such as year-end funding, to purchase equipment for protective services and these funds are not as easily identified. Protective services faces the possibility that such year-end funding may disappear under an enterprise model and therefore OPS is at risk of underfunding operations across the Agency. Under MAP, resource allocation responsibility was expected to shift to the Agency level with Centers vying for a finite amount of money, and it remains critical for OPS to understand the full scope of funding requirements if any functions are to be centralized at NASA Headquarters.

Nevertheless, several MAP initiatives, if properly implemented, could leverage economies of scale for protective services operations. For example, each Center procures standard security equipment such as card readers, intrusion detection systems, closed circuit television, and the hardware and software necessary to support these systems, which if purchased in bulk could likely save money. Further, although each Center would still require a local presence to perform physical security functions, some of the functions currently performed at all Centers, such as background checks and international visitor coordination, could be centralized rather than conducted individually at each Center.

Available Funding Rather than Risk Drives Center Security Decisions

Managers at the Centers we visited made security staffing and infrastructure protection decisions based primarily on current and projected budget allocations rather than an assessment of critical security threats or risks. While overall security policy and oversight priorities are set at the Agency level, implementation and funding of those responsibilities reside at the Centers. Even though NASA policy states that the AA for OPS is responsible for ensuring that adequate resources are provided to accomplish the Agency's security mission, until the decision to implement MAP, Headquarters OPS did not track protective services costs across the Agency and has limited insight or influence into protective services spending at the Center level.¹⁶ This allowed Center management to significantly influence security operations decisions related to funding, staffing, mitigating deficiencies, authority, and responsibilities. Center protective services experts have very little influence when it comes to budget

¹⁵ Implementation of enterprise risk management is required by Office of Management and Budget Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* (July 15, 2016). See also Government Accountability Office, *Enterprise Risk Management: Selected Agencies' Experiences Illustrate Good Practices in Managing Risk* (GAO-17-63, December 1, 2016).

¹⁶ NPR 1600.1A.

allocations and are left to adjust day-to-day operations based upon funding provided by the Center, as opposed to prioritizing protective services based upon results of a security risk assessment process. As illustrated in the following three examples, this approach has led to the issuance of security requirement waivers, reduced patrols of NASA Critical Infrastructure (NCI) assets, local protective services offices absorbing the cost of non-security personnel, and the assignment of security personnel to perform non-security tasks.

Center Shifted Security Resources to Non-security Functions

Senior leadership at [REDACTED] revised and removed some requirements of the Center's 2017 protective services contract because of budgetary concerns and instead used security funds to pay for non-security operational needs. Specifically, after developing a performance work statement to support the Center's security needs, in May 2017 procurement officials informed [REDACTED] leadership that security contractor proposals would cost approximately \$34 million.¹⁷ These proposals were about \$1.2 million more than what the Center Chief Financial Officer and Center management officials deemed "affordable." Subsequently, [REDACTED] leadership initiated discussions to revise the performance work statement's security requirements and discussed several items that could be removed in order to meet the desired budget target: eliminating a Security Management Maintenance and Support Technician; eliminating a Visitor Control Officer [REDACTED]; removing 24/7 staffing from the [REDACTED]; and eliminating a second Emergency Dispatch Center Security Officer from [REDACTED]

[REDACTED] leadership and Source Evaluation Board members ultimately decided to remove 24/7 staffing from the [REDACTED], while at the same time using protective services staff to perform the non-security related task of operating an airport shuttle bus service for Center employees. Removing staff from [REDACTED] does not comply with NASA policy, which states "all Center perimeter entry access control points open to traffic shall be staffed by armed, uniformed Security Police Officer/ Security Officer personnel at all times."¹⁸ Instead of manning the [REDACTED] with armed personnel after hours, [REDACTED] leadership opted to employ measures stipulated in a previously Headquarters-approved waiver and operated the [REDACTED] control entry, vet personnel, and determine their fitness to enter the Center.¹⁹ The waiver approved in February 2016 cited budgetary constraints as the reason the requirement could not be met and included compensatory measures, such as [REDACTED] controlling entry, in lieu of meeting the requirements.

Even though the waiver was approved, Center PSO personnel said they opposed removal of [REDACTED] staffing and that [REDACTED] was not their desired solution. In particular, removing staff from [REDACTED] increased reliance on [REDACTED] sole Emergency Dispatch Center Security Officer to perform additional security duties when the [REDACTED] was unmanned. This was problematic as the officer does not have [REDACTED] and instead was limited to monitoring inbound and outbound gate activity using [REDACTED] while performing other assigned tasks. These factors increase the risk that a breach of the perimeter [REDACTED] may go undetected.

¹⁷ The protective services performance work statement defines program management as the technical and business functions to plan, implement, track, report, and deliver the required products and services described in the contract.

¹⁸ NPR 1600.1A.

¹⁹ Waivers are a request for a permanent or extended deviation or exemption from a specific procedural requirement granted by the Associate Administrator for Mission Support Directorate with Center Director and OPS concurrence.

In fact, having protective services personnel manning [REDACTED] was crucial to stopping a potential [REDACTED]. A protective services officer [REDACTED] stopped a suspect vehicle that was evading local law enforcement from accessing the Center. Lack of a continuously [REDACTED] is concerning since [REDACTED] is home to several NCI facilities, one of which the audit team gained access to through an unsecured door during their site visit. We informed [REDACTED] Deputy Security Chief and the physical security specialist of our ability to access the NCI facility, both of whom noted an often relaxed approach to security by program managers [REDACTED], and stated they recognized the lax [REDACTED] security as an ongoing challenge.

While [REDACTED] leadership eliminated a 24/7 armed security officer from [REDACTED] due to costs, the contracting officer representative reported that management decided to continue providing—in the same contract—[REDACTED] service for Center employees. For many years the [REDACTED] protective services contract has required armed security officers to provide [REDACTED] service to NASA employees using a [REDACTED] during non-business hours (4 p.m. to 6 a.m., Monday through Friday, and anytime on weekends and holidays). From January to August 2018, protective services officers made [REDACTED] after business hours.²⁰ [REDACTED] procurement and protective services personnel told us that the [REDACTED] has been a component of at least the last four [REDACTED] protective services contracts and provides a significant cost savings to the Center by not having to [REDACTED]. However, the officials did not produce a formal cost analysis showing the estimated savings. Moreover, [REDACTED] management said it achieved cost savings by requiring security personnel to [REDACTED] since they were already working in the evening and on holidays even though the Center pays another contractor for [REDACTED] service during normal business hours.

[REDACTED] PSO representatives expressed concern that the contract requirement to perform a non-security related [REDACTED] duty outweighed the need for an armed security officer on Center after normal business hours. According to the PSO Chief, the [REDACTED] requirement hinders protective services personnel from performing their assigned duties at [REDACTED]. For example, if an officer is conducting a building inspection, the officer must stop that task, leave their post, [REDACTED]. The contract specifies that security personnel shall perform [REDACTED] within 30 minutes of notification unless an emergency situation warrants delays. Furthermore, security officers called to perform the [REDACTED] duties do so armed and in full uniform—even though they are not authorized to carry a weapon off NASA property. [REDACTED] management contends that utilization of existing protective services staff to operate an [REDACTED] during low volume, non-duty hours is a low risk service that has no connection to and or impact on the level of protective services at [REDACTED]. We disagree. In our opinion, [REDACTED] use of armed security officers to [REDACTED] is not a legitimate use of protective services resources and violates NASA policy regarding security officers carrying weapons off Center.²¹

²⁰ As a point of comparison, [REDACTED].

²¹ NPR 1600.1A.

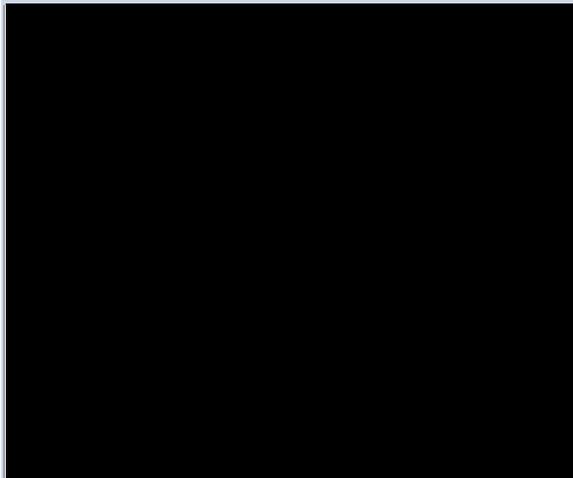
Large Reduction in Protective Services Budget Taxes [REDACTED] [REDACTED] Center Security

According to the Center Protective Security Chief and contract managers we spoke to, a decreased budget, increased workloads, and reduced staffing over the past few years has lowered staff morale and strained Center PSO resources. According to the [REDACTED] Chief of PSO, across-the-board budget cuts over the last 5 years have prevented the office from hiring an adequate number of staff or updating out-of-date security equipment. [REDACTED] protective services contract, [REDACTED] initially had a total potential value of \$92.5 million over 6 years. However, shortly after the contract was awarded, Center management reduced the contract's funding by more than \$10 million.²² The cuts were not based on reduced security needs, but rather resulted from an 11 percent reduction in the CMO budget [REDACTED].

In an effort to mitigate the effects of the budget reductions on day-to-day security operations at [REDACTED] the protective services' contractor reduced the number of security personnel, hours worked, and patrols at several facilities. For example, as of February 2019 the [REDACTED] contractor moved 14 protective services officers from full-time to part-time status. Of the 40 full-time officers remaining, only 17 work full 40-hour schedules while the remaining officers work between 32 and 38 hours a week. Within the last 2 years, the contractor also eliminated 11 of 22 Technical Support Specialists who process background investigation adjudications, along with a dispatch supervisor and the Support Services Manager, all of whom supported day-to-day security operations at [REDACTED].

In addition, the protective services contract manager told us that he is constantly shifting the remaining security personnel to fill security gaps because while staffing has declined the number of required security tasks has remained the same.²³ Security personnel are rotated daily to fill gaps in security coverage, a situation that results in unattended posts and positions. For example, the [REDACTED] is staffed by four security [REDACTED]. Three of these individuals are assigned to the gate as part of their regular duties; however, one patrol officer, who otherwise would be performing patrols on Center [REDACTED]

[REDACTED] is pulled from those duties to work the [REDACTED].²⁴ A second patrol officer is also pulled from their patrol duties [REDACTED] to work [REDACTED]. To compensate for the reduction of two patrols [REDACTED], the contractor reassigns two officers, whose regular duties include investigations, special response, counterintelligence and counterterrorism, technical surveillance countermeasures, threat



²² The first reduction of \$10.1 million occurred in May 2013. Three subsequent reductions totaling \$176,669 occurred in February 2015, June 2016, and February 2018.

²³ As of February 2019, the contractor had a total of 73 personnel assigned as protective services officers, dispatchers, and supervisors.

²⁴ [REDACTED]
[REDACTED]
[REDACTED]

assessments, and critical infrastructure protection, to perform vehicle patrols. This condition has existed for the past 2 years and in May 2019, [REDACTED] contracting officials issued a new statement of work that reduced staffing further.

Furthermore, beginning in fiscal year 2013, security patrols at the [REDACTED] [REDACTED] were cut due to budget reductions. Previously, the [REDACTED] had one roving patrol 24 hours per day, 7 days per week. However, that position was eliminated, and as of March 2019, the [REDACTED] has one security officer assigned to the entrance Monday through Friday from 6 a.m. to 6 p.m. After 6 p.m., patrol duties, incident response, and building walk-throughs are supported by [REDACTED] personnel who travel between [REDACTED].²⁵ The [REDACTED] [REDACTED] is unmanned and accessible by card reader from 10 p.m. to 6 a.m., Monday through Fridays and on weekends. Similar to [REDACTED] security staff monitor the entrances to [REDACTED] [REDACTED] instead of providing the 24/7 manned coverage for perimeter entry required by NASA policy.²⁶ Unlike [REDACTED] PSO took this action without obtaining a waiver from Headquarter OPS, with officials explaining they were unaware of the need for a waiver. [REDACTED] Security Chief said the decrease of in-person coverage at these locations is further exacerbated by the lack of funding, as they are unable to repair or replace [REDACTED] these areas. [REDACTED] PSO officials said that [REDACTED] located throughout [REDACTED] [REDACTED] are not functioning and [REDACTED] will reach their end-of-life by 2023. [REDACTED] PSO officials expressed concern that maintenance and updates will only be supported by Center management in response to an emergency or disaster situation.

The [REDACTED] Director of Center Operations is responsible for allocating staff to the PSO, which as of March 2019 was comprised of 16 civil servants. However, two of these positions were filled by employees who do not perform protective services duties. Specifically, one of the employees works on [REDACTED] [REDACTED] while the other is detailed from the PSO to another directorate.²⁷ According to the [REDACTED] Security Chief, these two non-security positions replace critical unfilled positions within the Center PSO, including a personnel security specialist, a regional administrative/IT manager, an Office of Emergency Management Planner, and an alternate communications security manager/supervisory security officer. [REDACTED] Chief of Security said all four of these positions are necessary to adequately meet the Center's protective services requirements and according to the PSO, he has submitted critical hire requests to Center management for the past 2 years, though it was not until March 2019 when the Protective Services Division received authorization for three critical hires.²⁸ According to [REDACTED] Director of Center Operations, staffing decisions are prioritized across the entire Center Operations directorates to stay within the budget allocated by Center leadership, and from his perspective the requested PSO hires were a lesser priority.

²⁵ The facilities are approximately [REDACTED].

²⁶ NPR 1600.1A states that "all Center perimeter entry access control points open to traffic shall be staffed by armed, uniformed Security Police Officer/Security Officer personnel at all times."

²⁷ In September 2019, [REDACTED] PSO officials told us that the [REDACTED] employee transferred out of the Protective Services Division and the other person has returned from the rotational assignment.

²⁸ In September 2019, [REDACTED] PSO personnel said two of the positions had been filled and the third position was currently advertised.

Center Has Not Provided Adequate Oversight of Protective Services Contractor

Similar to the situation at [REDACTED] limited funding at [REDACTED] has resulted in several personnel holding multiple jobs, leading to what [REDACTED] PSO personnel say is a reactive rather than proactive approach to day-to-day security operations. For example, the current contracting officer representative is serving simultaneously as the [REDACTED] and Head of Emergency Services. The [REDACTED] Chief also expressed concerns that key protective services staff are single points of failure and that all three [REDACTED] civil servant Personnel Security Specialists may retire by the end of 2019. However, the [REDACTED] Chief said his biggest staffing concern was with a contracting officer position occupied by three different people since July 2015. Collectively, the inadequate number of security personnel results in staff being responsible for multiple duties, which prohibits [REDACTED] personnel from wholly focusing on their specific protective services responsibilities.

We found that lax oversight of the Center's protective services contract by [REDACTED] contracting officials resulted in inappropriate and unnecessary costs to the government. Specifically, among the many oversight and procedural failures, [REDACTED] contracting officials assumed costs for which the contractor was responsible such as completing background investigations, paid the contractor two requests for equitable adjustment without adequate supporting documentation, paid the contractor for fire vehicle maintenance services that were already paid in the contract, established an in-house fire mechanic program without justification at an additional cost to the government, and had not completed contractor performance assessments in a timely manner. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]²⁹

Protective Services Identified Deficiencies but Center Follow-up Action Lacking

Center Functional Reviews and facility security assessments are used by protective services personnel to evaluate the Agency's compliance with federal and NASA security requirements and ensure the appropriate level of protection is in place to adequately and economically safeguard NASA's assets. However, we noted that NASA managers do not consistently take timely action to mitigate or fund the deficiencies identified during these reviews. Since Center PSOs do not have decision-making authority, do not fund security improvements, and cannot own or accept risk, their role in performing assessments, communicating findings, and implementing recommendations is solely advisory.

Center Functional Reviews

Headquarters OPS reviews each Center every 3 years to identify potential security deficiencies and ensure that protective services programs remain in compliance with applicable federal and Agency policies.³⁰ The review teams generally spend 2 days at a Center reviewing records to determine if

²⁹ [REDACTED]

³⁰ DHS, *The Risk Management Process for Federal Facilities*; Exec. Order No. 12977, *Interagency Security Committee* (October 19, 1995); and NPR 1600.1A.

buildings are being appropriately secured, testing perimeter access to ensure there are no breaches in perimeter fences or at ingress/egress gates, and determining if there are any outstanding security deficiencies. They also document commendable observations, noncompliance/nonconformance issues, and areas to improve effectiveness or efficiency. A risk probability versus the potential impact of the risk occurring is included with every finding. The results of these reviews are provided to the Center Director with the understanding the deficiencies will be corrected, although the reviews impose no deadline to complete corrective actions and there is no requirement to report back to the review team about a Center's progress in mitigating deficiencies.

While OPS conducts internal reviews to identify potential security deficiencies, they have no authority to take corrective action. Our examination of Center Functional Reviews conducted at the █████ Centers we visited found that numerous recommendations have remained unaddressed for multiple years, including utilizing unauthorized systems for conducting background investigations, foreign nationals maintaining access to Center facilities long after their identification badges should have been terminated, access controls lacking at most buildings at a component facility, and housing flight hardware in a facility that does not provide basic security protections. Center Functional Reviews also found that some NCI facilities were not safeguarded in accordance with Agency policy.

Each Center provides a response to the AA for OPS, which states whether they concur, partially concur, or do not concur with the recommendations, along with an explanation of the actions to be taken. However, in some cases Center Directors responded that recommendations cannot be completed due to a lack of funding. Headquarters OPS personnel confirmed that even though Center Directors are responsible for correcting deficiencies identified during these triennial reviews, OPS has no authority to enforce its findings and therefore corrective actions tend to languish. For example, the 2018 Center Functional Review at █████ repeated four findings from the 2014 Functional Review that had not been corrected, two of which were also reported in 2010, including a finding that some NCI assets do not meet federal and NASA policy requirements for physical security countermeasures.

Facility Security Assessments

Government assets and infrastructure do not all require the same degree of protection. The Department of Homeland Security (DHS) provides a risk management framework for determining the security level for a federal facility.³¹ Under DHS criteria, a facility's security level is based on five factors—mission criticality, symbolism, facility population, facility size, and threat to tenant agencies. Security levels range from Level I (lowest risk) to Level V (highest risk) and each security level has a corresponding level of required protection for the facility, meaning that the baseline level of protection for a Level I facility is minimal compared to a Level V facility, which is very high.

Using these guidelines, Center protective services personnel conduct facility security assessments to determine the appropriate level of protection needed to adequately and economically safeguard every building on NASA Centers. The initial assessment of each facility is performed by Center PSO personnel. Centers are also assigned an overall security level based on the facilities they house. NASA policy requires facility security assessments to be conducted on each facility on a cyclical schedule based on

³¹ *The Risk Management Process for Federal Facilities* developed by DHS applies to all government-owned or leased facilities in the United States occupied by federal employees for non-military activities, regardless of whether the facility is to be constructed, modernized, or purchased.

the facilities' security level determination—at least every 5 years for Level I and II facilities and at least every 3 years for Level III and IV facilities.³² Responsibility for making the final security level determination rests with Center Directors, who must either accept the risk assigned to the facility by the PSO or fund the necessary security measures to reduce the identified risk. NASA programs that own or operate a facility on a Center may also be required to fund recommended security measures.

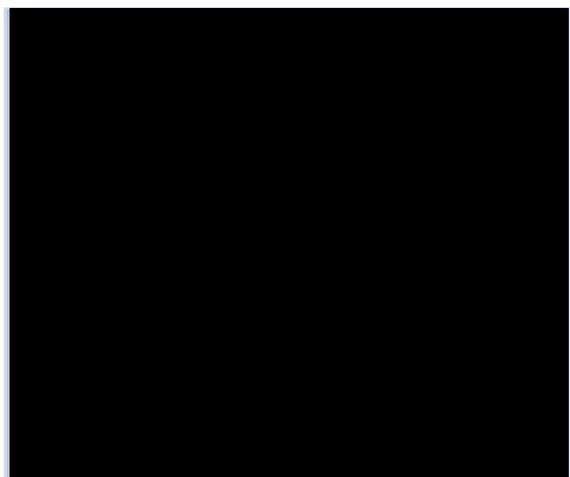
Although many Center PSO personnel told us these assessments were time consuming, resource intensive, and often conducted by PSO employees as an ancillary duty, we found that most Centers were completing their facility security assessments according to the 3- or 5-year schedule as determined by the facility security level or had a plan in place to do so.³³ We also observed that Centers view implementation of the assessments differently. For example, Centers ██████████ with a relatively small number of facilities did not view the assessments as overly burdensome while ██████████ which houses ██████████, has struggled to keep up with the assessments with only one civil servant and two part-time contractors responsible for completing them.

While Center protective services officials we interviewed found value in completing the security assessments, many noted a lack of follow through on the part of Center or program officials. Security assessments are intended to assist Center management in prioritizing assets to apply security resources in the most efficient and cost-effective manner possible based on risk. However, protective service officials told us that the results of facility security assessments were not always used to inform decision making.

We are concerned that NASA's abandonment of its plan to transition physical security to an enterprise-wide management model will result in a lost opportunity to standardize and streamline the facility security assessment process, identify best practices, and potentially reduce the burden on Center PSO staff.

Operational Inconsistencies Create Authority and Responsibility Challenges

Center PSOs across the Agency face authority and responsibility challenges due to inconsistent interpretations of federal arrest authority, applicable jurisdiction, carrying of weapons, and implementation of fire services. Further, at Centers with substantial tenant populations, PSOs said they are challenged by increasing workloads and shifting policing responsibilities and a lack of additional funding proportionate to the increased services provided. According to an internal NASA review, inconsistency in interpreting the authorities related to protective services is the greatest risk to NASA, its civil servants, and contractor personnel.



³² NPR 1620.2A, *Facility Security Assessments* (October 7, 2015). NASA elected to combine DHS facility security Levels I and II to equal NASA's Level I. Therefore, NASA only has four facility security levels, with Level IV being the highest.

³³ By April 2019, all facility security assessments were completed at the ██████████ Centers we visited.

NASA Policy Unclear Regarding Federal Arrest Authority

Centers are not utilizing federal arrest authority consistently across the Agency. Federal arrest authority, granted under U.S. Code and implemented through the Code of Federal Regulations, allows authorized NASA security personnel to arrest an individual without a warrant for any offense against the United States committed in their presence.³⁴ According to the Code of Federal Regulations, NASA security force personnel may exercise this arrest authority provided they have (1) graduated from an accredited training course and (2) been certified in writing by the AA for OPS, or his designee, as specifically authorized to exercise arrest authority.³⁵

The Agency satisfies the first of these requirements using the NASA Protective Services Training Academy that provides NASA-specific training to all protective services' civil servants and contractors. While all personnel receive the training required to exercise federal arrest authority, not all Academy graduates are authorized to exercise this authority at their NASA installation due to differing Center management preferences. As a result, for example, security personnel at ██████ must rely on NASA Office of Inspector General special agents or local law enforcement authorities to make arrests, while at ██████ Academy graduates are authorized to make arrests on Center in specific circumstances.

NASA policy distinguishes between the authorities of security officers versus security police officers (see Table 2), with only security police officers permitted by NASA to exercise federal arrest authority. The protective services contracts for ██████ define the roles and duties of security officers and security police officers and those descriptions align with NASA policy. Conversely, the ██████ contract provides for only security officers and does not mention security police officers or the possibility of performing an arrest on Center.

³⁴ National and Commercial Space Programs, 51 U.S.C. (2010) states that under regulations prescribed by the [NASA] Administrator and approved by the [U.S.] Attorney General, employees of the Administration and of its contractors and subcontractors authorized to carry firearms under section 20133 of this title may arrest without warrant for any offense against the United States committed in their presence, or for any felony cognizable under the laws of the United States if they have reasonable grounds to believe that the person to be arrested has committed or is committing such felony. Persons granted authority to make arrests by this section may exercise that authority only while guarding and protecting property owned or leased by, or under the control of, the United States under the administration and control of the Administration or one of its contractors or subcontractors, at facilities owned by or contracted to the Administration.

³⁵ 14 C.F.R. § 1203b.103 (2013).

Table 2: Protective Services Officer Definitions

Protective Services Term	Definition
Security Officer	An armed officer who has successfully completed the required NASA training but who is not to exercise NASA arrest authority. Duties may include but are not limited to first response to emergencies, mobile patrols, temporarily detain or seize with reasonable suspicion, inspections, perimeter and internal access control, contingency posts, and crowd control. A security officer may request that a security police officer perform an arrest when he or she either has directly observed a federal offense or has reasonable grounds to believe that a felony has been committed.
Security Police Officer	An armed officer who has successfully completed the required NASA training with NASA federal arrest authority. Duties may include but are not limited to first response to emergencies, enforce federal law, mobile patrols, inspections and searches, traffic enforcement, investigations, and other duties as required. A security police officer may perform an arrest upon request of a security officer, as described above.

Source: NPR 1600.1A.

While NASA policy designates the AA for OPS as the official responsible for the implementation and management of the Agency’s federal arrest authority program, the AA has delegated this responsibility to Center Directors and Center Chiefs of Protective Services. Consequently, the delegation has resulted in Centers handling arrest authority differently. During our site visit at ██████ we learned that neither civil servant nor contractor protective services personnel are authorized by the Center Director to execute arrest authority on Center and instead must rely on local authorities. In fact, the ██████ security contractor’s Standard Operating Procedure states: “No member of the security force is a law enforcement officer (police officer) or federal officer. No member has federal arrest authority, nor have they been granted other powers of arrest by the U.S. government.” Protective services officials at ██████ explained that this limitation on protective services’ authority was put in place by Center leadership many years ago. ██████ leadership told us that they have historically relied on local law enforcement because there have not been enough incidents on Center to justify protective services personnel having arrest authority.

In an effort to ensure standardization across the Agency, in 2017 NASA’s training academy stopped offering the Security Officer Fundamentals Certification Course since it did not include arrest authority certification and, in its place, required all protective services civil servants and contractors to attend federal arrest authority training class. The purpose of the new training standard was to provide all security forces with the training necessary to exercise federal arrest authority. All protective services officers who successfully complete the course receive a certificate acknowledging they have been trained to execute arrest authority. However, once ██████ officers return to their Center, they are required to surrender their federal arrest authority certificates and are reminded that they do not have arrest authority. ██████ is the only NASA Center that has adopted this practice.

In 2015, ██████ Center Functional Review noted that the Center’s procedure is “confusing and contradictory with regard to arrest authority.” In 2018, the Mission Support Council (MSC) tasked Headquarters OPS to consult with the NASA Office of the General Counsel (OGC) regarding the Agency-wide interpretation of federal arrest authority.³⁶ A July 2018 memorandum from the NASA OGC

³⁶ See Appendix B, Decision 4—Jurisdiction and Arrest Authority.

primarily focused on the issue of NASA firearms being carried off Center and cited the statutes and regulations that authorize the Agency’s arrest authority while also referencing the NASA policy, previously described, that allows for deviation by the Centers.³⁷ However, OGC did not directly address the issue of the Agency’s interpretation of federal arrest authority.

In October 2018, NASA incorporated the OPS BSA results and all related MSC decisions into the MAP process. As of May 2019, █████ contractor personnel were being trained to exercise arrest authority and the █████ PSO was working with the Center Chief Counsel to develop an implementation plan. In addition, OPS is working with █████ Office of Chief Counsel and Center Management to authorize security personnel to make arrests on Center. The current █████ Center Director supports implementing federal arrest authority and has drafted an authorization memorandum. OPS expressed confidence that standardization of arrest authority throughout the Agency could be implemented regardless of the MSC direction on MAP. In August 2019, OPS officials told us that all Center contractor security officers will still be authorized to make arrests in the performance of their duties.

Inconsistent Jurisdiction across the Agency

NASA Centers operate under a hodge-podge of federal, state, and/or local authorities across the country. Government-owned land can be categorized in four ways with respect to jurisdiction—exclusive, concurrent, partial, and proprietary (see Table 3).

Table 3: Jurisdictions

Jurisdiction	Definition
Exclusive	The federal government and federal law enforcement entities maintain all of the authority within the land area in question, while the state and its state and local law enforcement entities have no residual police powers.
Concurrent	Both federal and state governments, and their respective law enforcement entities, have jurisdiction over the property.
Partial	The state grants authority to the federal government to legislate over an area, while the state reserves the right to exercise, alone or concurrently with the federal government, other authority greater than the right to serve civil or criminal process.
Proprietary	The federal government has rights similar to a private landowner, but also maintains its authorities and responsibilities as the federal government. Under proprietary jurisdiction, the local government is the principal municipal police authority.

Source: NASA OPS.

NASA Centers and component facilities across the country do not fall under a consistent jurisdiction (see Table 4). Some NASA Centers fall under a single jurisdiction while others are covered by multiple jurisdictions, often due to the jurisdiction assigned to the land when it came into the government’s possession. As a result, implementation of security policies and the responsibilities of security personnel vary across the Agency. For instance, at Centers with exclusive federal jurisdiction such as █████, the federal government is responsible for all law enforcement activities, and federal officers and agents are responsible for handling all investigations and cases. State and local

³⁷ NASA OGC, *Response to Questions Regarding Contract Security Personnel Firearm Authority and Federal Arrest Authority* (July 6, 2018).

authorities may respond and provide support if requested during a serious security incident, but would not lead the effort or have jurisdiction to arrest or prosecute offenders.

Table 4: NASA Center and Facility Jurisdictions as of March 2019

NASA Centers and Facilities	Jurisdictions			
	Exclusive	Concurrent	Partial	Proprietary
Ames Research Center	X		X	X
Armstrong Flight Research Center	X	X		
Glenn Research Center		X		X
Plum Brook Station		X		
Goddard Space Flight Center	X			
Jet Propulsion Laboratory				X
Johnson Space Center				X
White Sands Test Facility				X
Kennedy Space Center		X		
Langley Research Center	X			X
Marshall Space Flight Center	X		X	X
Stennis Space Center				X

Source: NASA OPS.

During ██████ September 2015 Center Functional Review, the review team noted that the Center’s policies on use of force, detention procedures, and search of detained persons were inconsistent with Agency policy and incompatible with the principles taught at NASA’s training academy. The review team concluded that overly restrictive and confusing use of force and arrest policies have caused uniformed security officers at ██████ to act with hesitation and uncertainty. For example, ██████ during a random search by ██████ protective services officers, a NASA employee was found to be in possession of illegal drugs and, per Center protocol, security officers called police from the surrounding jurisdiction. However, local law enforcement’s confusion regarding ██████ varying jurisdictions and the lack of arrest authority by Center protective services personnel resulted in the employee not being arrested and instead allowed to work on the Center that day.

The BSA security management team recommended the Agency retrocede jurisdiction for all federal exclusive areas under its control, preferably to a consistent jurisdiction for all NASA facilities (e.g., concurrent). The goal was to reduce confusion by providing a common understanding of the authorities of contractor security personnel and standardizing training and security policies. The MSC also instructed Headquarters OPS to “establish and oversee Agency-led retrocessions of jurisdiction on NASA property as appropriate.”³⁸

Similar to arrest authority, issues related to jurisdiction had been incorporated into MAP and OPS is working to address the issue Agency-wide.

³⁸ MSC-2018-05-01, *BSA Protective Services Deep Dive Decision Memo* (May 10, 2018).

Inconsistent Firearms Policies and Procedures

We found Agency-wide inconsistencies regarding government-provided weapons being carried off Center by contractor employees and with firearms issuance and return procedures. According to NASA policy, the AA for OPS is the approval authority for the Center's Chief of Protective Services to carry firearms. Under authority delegated by the AA, the Center Chief then grants approval for special agents, designated security specialists, and contractor security personnel to carry firearms.³⁹ While NASA policy describes the authority, requirements, and training necessary to be armed, it fails to articulate an Agency-wide standard for arming protective services civil servants. Consequently, this decision is left to the discretion of each Center.

This lack of a uniform standard has led to differences across the Agency regarding which PSO civil servants are authorized to carry firearms. For instance, ██████ Chief wants all PSO civil servants to be easily recognized and their presence known; therefore, they openly wear their badge and firearm while performing their duties at the Center. Conversely, ██████ management decided not to arm its civil servant security staff and none have been issued firearms. At ██████ contractor employees are trained to perform the duties of an armed officer and the Center Chief believes a separation between civil servants who manage security and contractor employees who execute the duties of an armed officer is necessary. At ██████ whether or not a civil servant security officer carries a firearm is dependent upon the duty being performed. However, they are encouraged, but not required to carry a firearm when away from their desk.

Inconsistent application of firearms authority was identified as an issue by the BSA team during its 2018 review. In response, the MSC tasked Headquarters OPS to determine which protective services civil servants should be authorized to carry firearms and develop a consistent Agency policy.

In 2018, the NASA OGC issued a legal opinion stating the AA for OPS may establish policy that would permit contract security personnel to legally carry firearms while conducting limited activities off but near NASA installations when such activities are clearly and directly in the course of their duties to protect property on the installation. However, the opinion concluded the Administrator does not have the authority to permit contractor security personnel to carry firearms off Center to perform wider ranging activities where the personnel are not directly engaged in protecting facility property.⁴⁰

We found this 2018 legal opinion is being interpreted differently by Center management. For example, contractor security officers from ██████ leave the perimeter of their main Centers armed to perform security checks at Agency offsite locations while contract security officers from ██████ leave the Center while armed to operate the airport shuttle bus. However, contract security personnel cannot carry firearms off Center to perform activities where the officers are not directly engaged in the protection of Agency property; therefore, ██████ use of armed security officers to drive an airport shuttle bus violates NASA policy. Although ██████ officials we spoke with were aware of the restrictions, security officers are still tasked to perform this duty while armed.

³⁹ OPS special agents derive their authorities from NPR 1600.1A whereas NASA OIG special agents derive their more extensive authorities from the Inspector General Act of 1978, as amended, through Pub. L. No. 115-254 (October 5, 2018).

⁴⁰ National and Commercial Space Programs, 51 U.S.C § 20133 (2010) and NASA OGC memorandum, *Contract Security Personnel Firearm Authority and Federal Arrest Authority*.

Additionally, [REDACTED] issuance of weapons, ammunition, radios, and keys is largely conducted without supervision. While individuals are monitored on closed circuit television, a supervisor is not present to oversee issuance of firearms or other security equipment after normal business hours. This unsupervised process has been the [REDACTED] standard for past and current contracts. As a result, a single supervisor is assigned to [REDACTED] who cannot be present for all shift changes when firearms are issued to or returned by protective services personnel. This differs from the procedures we observed at other Centers where these duties are performed by a property custodian (or armorer) who is often assisted by the shift supervisor. NASA policy states that the control and custody of all Arms, Ammunition, and Explosives (AA&E) within a Center shall be under strict accountability at all times.⁴¹ Each custodian is required to maintain an ongoing inventory of all AA&E with a receipt system for recording the issuance, transfer, and return of all firearms, ammunition, and explosives. When any of these items are lost, stolen, or found missing, the custodian is required to immediately report their status to the AA for OPS. We believe the system in place at [REDACTED] reduces accountability and fails to meet Agency requirements.

As of August 2019, action to address these issues had not been completed; however, Headquarters OPS senior managers acknowledged that reconciling firearms policy and procedure issues is critical to effectively implementing any enterprise initiative.

Fire Services Oversight Not Clearly Defined

Responsibility and authority over fire services is fragmented throughout the Agency, and NASA policy is not clear regarding the responsible official on fire-related matters.⁴² At some Centers, fire services reports to the protective services organization while others may be managed by the Center's safety and mission assurance organization. NASA organizational policy lists OPS as the sole focal point for policy formulation, oversight, coordination, and management of fire and security services.⁴³ However, NASA safety policy states the Chief, Safety and Mission Assurance is the senior safety official for the Agency and exercises functional oversight authority over all NASA fire protection and life safety activities.⁴⁴ In addition, while OPS does not have a fire services representative within its organization, the Office of Safety and Mission Assurance employs an Agency Fire Protection and Life Safety Program manager.

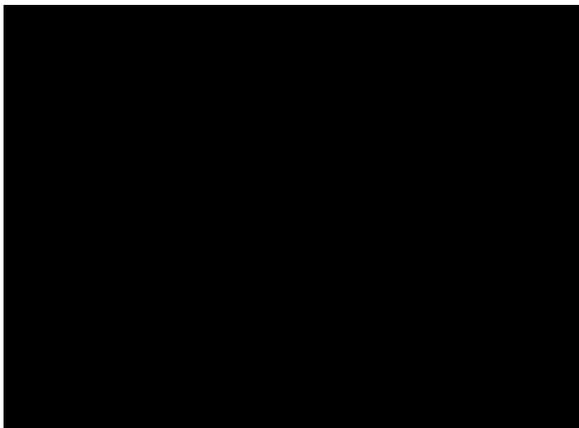
⁴¹ NPR 1600.1A.

⁴² NASA Technical Standard 8719.11, *Safety Standard for Fire Protection* (November 19, 2008).

⁴³ NASA Policy Directive 1000.3E, *The NASA Organization w/Change 41* (April 15, 2015).

⁴⁴ NPR 8715.3D, *NASA General Safety Program Requirements (Updated w/Change 1)* (August 1, 2017).

The BSA security management team acknowledged that the risk acceptance authority for fire-related issues was not clearly defined and recommended all fire services functions report to the Center PSOs. Such a reporting structure would establish clear and consistent lines of authority and eliminate conflicting interpretations of standards and policies. While the MSC decided that OPS is functionally responsible for fire services, it left several fire-related functions such as Authority Having Jurisdiction, fire protection system design, construction, maintenance, and inspection under the Office of Safety and Mission Assurance.⁴⁵ Some of the Agency fire experts we spoke with believe all fire-related services and functions should be consolidated under protective services because the current exclusion of certain functions contributes to a fragmentation in responsibility and authority.



The BSA also found that some Centers were not meeting fire protection requirements per the National Fire Protection Association (NFPA) standards.⁴⁶ Center Functional Reviews performed at ██████████ also noted similar concerns regarding equipment and staffing. For example, the ██████████ services fleet is in need of refurbishment and replacement. One vehicle is over 45 years old and replacement parts are no longer available. Two other vehicles are over 23 years old and all are in need of repairs.⁴⁷ National fire standards recommend a 20-year life cycle for emergency vehicles before replacement.⁴⁸ At ██████████ which by informal agreement responds to fire emergencies at the Center, did not meet NFPA staffing requirements. The BSA concluded that budgetary constraints caused some Centers to unofficially accept the risk of not meeting these standards and in some instances, attempt to mitigate those risks without official guidance from the risk acceptance and waiver authority; however, protective services and safety and mission assurance personnel acknowledge that the risk acceptance authority for these issues is not clearly defined.

Like the firearms policy discussed above, as of August 2019 the resolution of fire services oversight responsibilities is not complete and remains an important step in the successful implementation of any enterprise initiative.

Protective Services Challenged by Increasing Number of Non-NASA Tenants

NASA is transitioning into a new era of increased commercialization and, as such, the missions of Agency Centers are evolving to include leasing federal space to non-NASA and non-governmental entities. This expansion has increased the workload, responsibilities, and complexity of the protective services mission. At each of the Centers we visited, we found PSOs struggling to meet their current security

⁴⁵ The Authority Having Jurisdiction is the delegated Safety Technical Authority for fire protection and life safety at the Center and is responsible for authorizing use of associated equipment, materials, installations, and procedures. Fire services functions include emergency medical services, fire inspection, fire department response, and emergency management.

⁴⁶ NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* (2010).

⁴⁷ In September 2019, ██████████ purchased two new fire trucks.

⁴⁸ NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles* (2017).

requirements. Additional tenants will result in a higher volume of security-related tasks performed by Center PSOs, including more background investigations, additional badges being issued and checked at entry gates, more traffic on Center roads, and additional people to account for during emergency situations. The protective services BSA indicated that 6 of 10 Centers cited an increase in workload due to private industry and non-NASA federal agency tenants without a concomitant increase in funding.

Centers granted authority to lease underutilized real property to private entities through enhanced-use leases (EUL). EUL authority allows federal agencies to enter into lease agreements that authorize the use of underutilized real property including land, buildings, and other structures to outside organizations. Revenues received from NASA's EULs may be used to cover the full costs to the Center in connection with the lease, and for maintenance, capital revitalization, and improvements of the real property assets and related personal property. The Agency has no standard for determining the cost of providing protective services and therefore Centers use differing methods to calculate the costs of providing these services to tenants. For example, charges tenants per square foot based on the fair market value of the leased property. This calculation includes all services provided by the Center with security and emergency services consisting of approximately 38 percent. Conversely, tenants at are charged a percentage of their total lease for use of Center services, including protective services, though the percentage varies among tenants and leases.

NASA policy directs the Center Chief of Protective Services to maintain oversight of all Center security activities, including those of tenant organizations. However, protective services personnel are not consistently involved in assessing the level of effort, costs, or personnel requirements commercial use of NASA properties entails. PSO managers told us they had only limited involvement in both near- and long-term Center planning for such tenants. In fact, the Center Chief stated that his office generally learns about new lease or construction projects through word-of-mouth or when driving around the Center. According to the Chief, as the Center ramps up efforts to transition with government and commercial operations, the PSO will not be able to keep up with the increased burden posed by new tenants on security, fire, and emergency response resources. According to Center officials, is planning requires additional effort from security, fire, and emergency operations. The Chief also noted that security staffing will become more of an issue the Center because of the significantly higher level of security required .

also has several commercial entities on the Center and plans for additional development. Currently, NASA civil servants work, consists of tenants from several non-governmental and service industries including research, development, academia, industry, non-profits, and commercial space.

and approximately 100,000 square feet of space for retail and other services.⁴⁹ These initiatives will increase the burden on security and fire services with additional people, vehicles, and buildings to protect. The housing aspect of the expansion will pose a variety of challenging situations for security and fire services, including how to handle allegations of domestic violence that may be outside their NASA training and thereby raise safety concerns for Agency security personnel.

⁴⁹

Based on our discussions with ██████████ Center management officials, we believe to date Center leadership has not adequately considered the increased burden additional tenants pose to security, fire, and emergency response operations. For example, the April 2018 ██████████ Center Functional Review noted that EUL agreements do not state any conditions for gaining access to NASA property. It was not until very recently that ██████████ PSO became involved with the housing lease agreements and provided input about regulations and screening for companies that pose a potential risk to NASA. This input is critical because we found that like ██████████ leasing office and PSO have a different understanding of the level of effort, funding requirements, and responsibility that ██████████ future development plans will impose on security operations.

CONCLUSION

NASA's ability to transition to an enterprise-level approach to security management depends largely on whether the Agency can overcome long-standing challenges (resistance) to centralizing decision making, particularly as it relates to personnel and funding. Although we recognize the importance of Center leadership having the flexibility to address local security needs, NASA's recent decision not to include physical security in its MAP implementation further highlights the difficulty the Agency faces as it works to ensure consistent application of security policies and procedures. Establishing an appropriate organizational and governance structure will provide OPS the mechanisms needed to identify, evaluate, and prioritize risks from an Agency perspective and the ability to allocate funding to mitigate these risks. With NASA's security operations changing in scope and complexity, NASA should ensure the Agency and Center security posture is based primarily on addressing the highest priority risks rather than planning security activities based primarily on available funds. NASA must implement an Agency-wide process in which security-related decisions are based on the application of risk assessment, risk mitigation, and when appropriate, risk acceptance.

In addition, resolving and reconciling differences in Centers' interpretation and implementation of OPS policies and procedures is critical for effective management of protective services. Centers are interpreting and implementing duties such as federal arrest authority and the provision and handling of firearms differently and Centers have varied jurisdictions within their boundaries. The Agency's current decentralized management approach to security will be challenged as NASA transitions into a new era of increased commercialization and, as such, the evolving missions of NASA Centers to include non-NASA and non-governmental tenants with additional security concerns. In anticipation of increased tenant activity, NASA management should establish mechanisms to ensure they are receiving equitable payment for protective services and that Center protective services officials are consulted early on when Centers consider adding new tenants.

RECOMMENDATIONS, MANAGEMENT'S RESPONSE, AND OUR EVALUATION

As NASA continues with its efforts to improve NASA's security management across the Agency, we recommended the Assistant Administrator for Protective Services:

1. Establish and implement an enterprise-level governance structure to identify, assess, and prioritize protective services risks and deficiencies, and fund applicable countermeasure(s) to mitigate or formally accept risk.
2. Standardize and streamline the facility security assessment process across the Agency to increase efficiency and inform decision making.
3. Research federal arrest authority (as directed in the Protective Services BSA Decision Memorandum) in conjunction with the Office of the General Counsel, formulate a unified response, and implement a consistent policy across the Agency.
4. Evaluate Agency-wide jurisdictions to determine if it is feasible for all Centers to be under the same jurisdiction or at least to determine if individual Centers should have all of their property under the same type of jurisdiction.
5. Coordinate with the Office of the General Counsel to standardize the carrying of firearms by NASA civil servants in an Agency-wide policy while also addressing the appropriate situations when NASA contractors may carry their government-issued weapons off NASA property.
6. In collaboration with the Office of Safety and Mission Assurance, evaluate fire services policies and functions Agency-wide, reconcile duties and responsibilities, and determine under which office—protective services or safety and mission—these responsibilities should reside.
7. Establish an Agency-wide policy on calculating protective services costs associated with tenant reimbursable expenses.
8. Develop procedures that require Center protective services officials to be a stakeholder in the planning process to meet protective services requirements for existing and new tenants.

We provided a draft of this report to NASA management who concurred with the recommendations and described planned actions to address them. We consider the proposed actions responsive to our recommendations and will close the recommendations upon completion and verification of the proposed actions.

Management's comments are reproduced in Appendix C. Technical comments provided by management have also been incorporated, as appropriate.

Major contributors to this report include Raymond Tolomeo, Science and Aeronautics Research Director; Julia Eggert, Project Manager; Noreen Khan-Mayberry, PhD; Jason Hensley; Scott Riggenschach; Sarah Beckwith; and Lauren Suls.

If you have questions or wish to comment on the quality or usefulness of this report, contact Laurence Hawkins, Audit Operations and Quality Assurance Director, at 202-358-1543 or laurence.b.hawkins@nasa.gov.

Handwritten signature of Paul K. Martin in black ink.

Paul K. Martin
Inspector General

APPENDIX A: SCOPE AND METHODOLOGY

We performed this audit from February 2018 through September 2019 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.

To answer our objective and gain an understanding of the Agency's management of security operations, we interviewed key Agency and Center officials and visited [REDACTED]. We chose these locations to obtain a cross section of Center characteristics such as geographic location, protective services contract value, and tenant activity. [REDACTED] protective services contracts [REDACTED] and [REDACTED] have significant tenant populations. We chose [REDACTED] due its [REDACTED] identified in prior NASA Office of Inspector General reports. Our interviews included the AA and Deputy AA for OPS along with the Executive Officer and key members of their staff. We also surveyed in writing and interviewed in person the Center Chiefs of Protective Services, Chiefs of Security, Authority Having Jurisdiction, special agents, emergency managers, and fire chiefs to gain an overall understanding of security and emergency operations across the Agency. We analyzed the Agency's security management BSA findings and the results of Center Functional Reviews performed on Center protective services operations. Additionally, we reviewed protective services contracts to determine how NASA oversees and evaluates performance and to identify common issues and concerns across the Centers, which included interviewing numerous officials to understand how the different security contracts are managed individually at each Center. Finally, we reviewed NASA policy, NFPA Codes and Standards, prior audit reports, external reviews, and other documents related to security.

Use of Computer-Processed Data

The computer-processed data used in this audit did not materially affect the findings and therefore, we did not test the reliability and validity of the data.

Review of Internal Controls

We reviewed federal regulations and NASA policies and procedures to determine NASA's internal controls for ensuring effective security management across the Agency. We analyzed the execution of the policy requirements as it related to the different disciplines of security, fire, and emergency management. The control weaknesses we identified are discussed in the body of this report. Our recommendations, if implemented, should correct the weaknesses identified.

Prior Coverage

During the last 5 years, the NASA Office of Inspector General and Government Accountability Office have issued nine reports of significant relevance to the subject of this report. Unrestricted reports can be accessed at <https://oig.nasa.gov/audits/auditReports.html> and <http://www.gao.gov>, respectively.

NASA Office of Inspector General

NASA’s Efforts to Improve the Agency’s Information Technology Governance (IG-18-002, October 19, 2017)

NASA’s Efforts to “Rightsize” its Workforce, Facilities, and Other Supporting Assets (IG-17-015, March 21, 2017)

Industrial Control System Security within NASA’s Critical and Supporting Infrastructure (IG-17-011, February 8, 2017)

Audit of NASA’s Cooperative Agreement Awarded to the City of New Orleans (IG-15-018, June 29, 2015)



Space Communications and Navigation: NASA’s Management of the Space Network (IG-14-018, April 29, 2014)

Government Accountability Office

Federal Real Property: GSA Should Inform Tenant Agencies When Leasing High-Security Space from Foreign Owners (GAO-17-195, January 3, 2017)

Homeland Security: Action Needed to Better Assess Cost-Effectiveness of Security Enhancements at Federal Facilities (GAO-15-444, March 24, 2015)

Federal Facility Security: Additional Actions Needed to Help Agencies Comply with Risk Assessment Methodology Standards (GAO-14-86, March 5, 2014)

APPENDIX B: BUSINESS SERVICES ASSESSMENT

DECISION MEMORANDUM

NASA performed a BSA on Headquarters OPS to evaluate the Agency's security management. The purpose of the BSA was to establish a more efficient operating model that meets current and future mission needs. The findings and observations from the BSA were reported to the MSC in May 2018. The Mission Support Council (MSC or Council) then reviewed the BSA team's options and recommendations and made seven key decisions, which are listed below.

Decision 1—Structure and Organization

Council Decision: As part of the MAP effort, OPS must evaluate each of the functions within their business services area (HSPD-12, Suitability/Fitness, National Security adjudication, and Foreign National International Visit Coordinator) and recommend which functions will remain local, which will become regionalized (how and where), and which will be consolidated or centralized (how and where).

Decision 2—Consolidate Emergency Management and Fire Services within the Office of Protective Services at the Center

Council Decision: OPS is functionally responsible for fire services (emergency medical services, fire inspection, and fire department response) and emergency management. This work does not include functions such as Authority Having Jurisdiction, fire protection system design, construction, maintenance, and inspection.

Decision 3—Funding for Unique Services

Council Decision: Through the Planning, Programming, Budgeting, and Execution process, the Safety, Security, and Mission Services Cost Account Manager will develop a funding model that defines baseline services that are funded via Agency Management Operations and those services that are mission specific and funded via pay for service by the programs.

Decision 4—Jurisdiction and Arrest Authority

Council Decision:

1. OPS will consult with the Office of the General Counsel regarding the Agency-wide interpretation of Federal Arrest and Firearms Authority. The General Counsel will issue a final written legal opinion within 60 days.
2. As delegated by the NASA Administrator, the AA for OPS will serve as the final decision authority regarding Agency-wide policy and implementation of federal arrest authority.
3. OPS will establish and oversee Agency-led retrocessions of jurisdiction on NASA property as appropriate.

Decision 5—Protective Services Civil Servants Carrying Firearms

Council Decision: OPS will determine which protective services civil servants are authorized to carry firearms and work with the Office of Human Capital Management, Office of the General Counsel, and Office of the Chief Health and Medical Officer to develop a consistent policy for protective services civil servants carrying firearms to have mandatory physical and psychological testing requirements.

Decision 6—Personnel Security Database

Council Decision: As part of MAP, OPS will work with the OCIO to consolidate individual personnel security databases utilized by Centers, the NASA Shared Services Center, and the Central Adjudication Facility to record suitability and fitness adjudication and security information into a single Agency adjudication database system under the management of OPS.

Decision 7—Electronic Physical Access Control System (EPACS)

Council Decision: OPS must

1. work with the OCIO to develop a comprehensive EPACS future-state architecture that reduces system duplication across Centers while maintaining or improving overall system capabilities and reliability;
2. as part of the MAP effort, explore the feasibility of consolidating Agency and Center EPACS funding for systems and work year equivalent support under OPS; and
3. in coordination with the Office of Procurement, develop a consistent acquisition approach/strategy for all NASA EPACS procurements, including systems and contracted support services.

APPENDIX C: MANAGEMENT'S COMMENTS

National Aeronautics and Space Administration
Headquarters
 Washington, DC 20546-0001



OCT - 7 2019

Reply to Attn of: Office of Protective Services

TO: Assistant Inspector General for Audits
 FROM: Assistant Administrator for Protective Services
 SUBJECT: Agency Response to OIG Draft Report, "Audit of NASA's Security Management Practices" (A-18-003-00)

NASA appreciates the opportunity to review and comment on the Office of Inspector General (OIG) draft report entitled, "Audit of NASA's Security Management Practices," (A-18-003-00) dated September 13, 2019.

In the report, the OIG found that NASA can improve its physical security, law enforcement, and fire services operations and makes eight recommendations to that effect.

Specifically, the OIG recommends that as NASA continues with its efforts to improve NASA's security management across the Agency, the Assistant Administrator (AA) for Protective Services (OPS) should:

Recommendation 1: Establish and implement an enterprise-level governance structure to identify, assess, and prioritize protective services risks and deficiencies, and fund applicable countermeasure(s) to mitigate or formally accept risk.

Management's Response: NASA concurs with this recommendation. As delegated by the NASA Administrator, the AA for OPS is the Agency Risk Acceptance Authority for all areas within the cognizance of protective services. As such, the AA for OPS receives security waiver requests submitted by the Centers and programs/projects, reviews the justifications and all applicable mitigation factors/efforts, and makes informed decisions as to whether or not to formally accept the security risk on behalf of NASA.

With regard to an enterprise-level governance structure for the identification, assessment, and prioritization of protective services risks and deficiencies, NASA also has a structure currently in place. For any protective services program, project, or system that has Agency-wide applicability or spans across multiple Centers, OPS is currently able to submit overguide budgetary funding requests for its accomplishment (i.e., Agency Management and Operations (AMO) funding level). An example of this is the funding of the Enterprise Physical Access Control System (EPACS) under the

Identity, Credential, and Access Management (ICAM) program that is currently in use across NASA. OPS's limitation in this area, however, comes when a security program/project does not have Agency-wide applicability and is only at the Center level. An example of this would be the installation of EPACS at a Center on an existing and/or new facility or the replacement of equipment due to the end of its life-cycle (i.e., Center Management and Operations (CMO) funding level). For Protective Services, AMO and CMO Cross-Agency Support funding is not under an enterprise governance structure.

Estimated completion date: The ability to integrate AMO/CMO budgetary decisional authority rests upon a final, agreed-upon direction with respect to the OPS Mission Support Future Architecture Program (MAP) operational structure. NASA estimates that this will be decided by the fourth quarter of FY 2020 (July-September). This will enable the development of an enterprise level governance structure that can be in place by September 30, 2020.

Recommendation 2: Standardize and streamline the facility security assessment process across the Agency to increase efficiency and inform decision making.

Management's Response: NASA concurs with this recommendation. The requirements for Facility Security Assessments (FSA) are established by the Department of Homeland Security (DHS) Interagency Security Committee (ISC), and NASA follows all DHS/ISC guidelines. Additionally, OPS utilizes its Integrated Protective Services Functional Reviews as a tool to assess a Center's use and implementation of FSA's as well as the corresponding Levels of Protection required. In 2016, OPS Functional Review teams incorporated the use of a 3x3 "Impact and Probability" matrix into their review process. The team analyzes each finding and makes a risk-level assessment using the 3x3 "Impact and Probability" matrix, which has provided an easier way to help Center leadership prioritize and focus on areas where the Impact and/or Probability is rated Medium to High.

While an enterprise management model for physical security would still help standardize and streamline the FSA process, the AA for OPS specifically works with Center leadership during the waiver request process for any NASA Procedural Requirements (NPR) for NASA perimeters and NASA Critical Infrastructure, examining all viable mitigations before making a waiver determination. Additionally, OPS has initiated actions aimed at increasing the efficiency and usefulness of the existing FSA process to increase its usefulness as a decision-making tool in several ways.

NPR 1620.3B, "*Physical Security Requirements for NASA Facilities and Property*," was updated in May, and administrative updates to NPR 1620.2, "*Facility Security System Assessments*" have been submitted to the NASA Online Directives Information System (NODIS) which provide clarifying language to standardize the implementation of DHS/ISC standards that the NPRs are based upon. Additionally, the updated NPR 1620.3B includes language regarding the Risk-Informed Decision Making (RIDM)

Process and the following definition for Risk Management: “A comprehensive approach to allocating resources for the protection of a facility, assets, and occupants to achieve an acceptable level of risk. Risk management decisions are based on the application of risk assessment, risk mitigation, and, when necessary, risk acceptance. Risk management includes two complimentary processes: RIDM and continuous risk management as described in NPR 8000.4B, “*Agency Risk Management Procedural Requirements*.” Additionally, a new appendix to assist senior management has been added to NPR 1620.3B, Appendix E: “*NASA Facility Security Assessment Flowchart Utilizing the Risk-Informed Decision Making and Waiver Process*.” These updates to NASA policy should enable the NASA Centers to properly apply the standards, identify risks, prioritize risks, and apply security resources in the most efficient and cost-effective manner possible based on RIDM.

Estimated Completion Date: The administrative update to the aforementioned NPR is estimated to be approved and finalized/posted in NODIS by March 31, 2020.

Recommendation 3: Research federal arrest authority (as directed in the Protective Services BSA Decision Memorandum) in conjunction with the Office of the General Counsel, formulate a unified response, and implement a consistent policy across the Agency.

Management’s Response: NASA concurs with this recommendation. In support of implementing a consistent Agency-wide policy in the area of Federal Arrest Authority (FAA), there have already been significant accomplishments.

On July 6, 2018, the NASA General Counsel issued a memorandum to the AA for OPS responding to questions regarding contract security personnel firearm authority and FAA. In the memorandum, the Office of General Counsel (OGC) confirmed the Agency’s FAA. Pursuant to 51 U.S.C. 20134, employees of NASA and its contractors and subcontractors who are authorized to carry firearms pursuant to 51 U.S.C. 20133 are authorized to make warrantless arrests under the regulations that have been prescribed at 14 C.F.R. 1203b. These regulations establish guidelines for the exercise of arrest authority including the requirements for training, certification, management oversight, and the conditions under which NASA security force personnel are authorized to make an arrest. This memorandum provided OPS with the critically needed legal opinion and unified response that supports the Agency-wide application of a consistent FAA policy.

Additionally, NASA has implemented a new 152-hour Basic Protective Services Training Program FAA course at the NASA Protective Services Training Academy (NPSTA) which strengthens the professionalism and capabilities of our security forces and ensures standardization across the Agency. When a candidate has completed the new Basic course, he or she will be fully trained with the ability to exercise FAA as defined in 14 C.F.R. 1203b.

Estimated Completion Date: While the above mentioned training ensures that all Center security forces have arrest authority, it is currently implemented differently between the Centers. OPS, in conjunction with OGC, will continue to develop policies and procedures for the NASA Centers to consistently implement FAA. Anticipated completion for an update of NPR 1600.1 that establishes consistent policy is on September 30, 2020.

Recommendation 4: Evaluate Agency-wide jurisdictions to determine if it is feasible for all Centers to be under the same jurisdiction or at least to determine if individual Centers should have all of their property under the same type of jurisdiction.

Management's Response: NASA concurs with this recommendation. While [REDACTED] are located on U.S. military installations and must follow the prescribed Department of Defense (DoD) jurisdiction, OPS will work in collaboration with OGC to assess the feasibility of changing proprietary and exclusive authorities to concurrent jurisdiction at all applicable Centers.

Estimated Completion Date: NASA anticipates the completion of this assessment, and any changes as appropriate, to occur for all applicable Centers by June 30, 2021.

Recommendation 5: Coordinate with the Office of General Counsel to standardize the carrying of firearms by NASA civil servants in an Agency-wide policy while also addressing the appropriate situations when NASA contractors may carry their government-issued weapons off NASA property.

Management's Response: NASA concurs with this recommendation. As mentioned in the Agency response to Recommendation 3, the NASA General Counsel issued a memorandum to the AA for OPS on July 6, 2018, responding to questions regarding contract security personnel firearm authority and FAA. In the memorandum, OGC stated that in order to fulfill the statutory and regulatory mandate to provide for security and safety on NASA installations, the AA for OPS may establish policy that would permit contract security personnel to legally carry firearms while conducting some very limited activities off but near NASA installations when such activities are clearly and directly in the course of their duties to protect property on the installation. However, based on the statutory language, the NASA Administrator does not have the authority to permit contractor security personnel to carry firearms off-Center to perform wide-ranging activities where the contractor security officers are not directly engaged in the protection of property that is located at a facility owned or contracted to the United States. In order to address this, OPS worked with OGC and the Office of Legislative and Intergovernmental Affairs (OLIA) to draft a Legislative Proposal: Modification of Language in Title 51 – National and Commercial Space Program, §20133 Permission to Carry Firearms and §20134 Arrest Authority. This proposal removes the language of limitation to permit contractor security forces to secure and safeguard NASA property

on and off-Center. It also enhances safety and security by permitting efficient use of contractor security forces for events such as: mishap scene security, interstate shipment of space hardware, protection of personnel, reallocation of security forces amongst nearby Centers, and the protection of astronauts and flight hardware as NASA moves forward in its partnerships with commercial entities who are launching from and landing on U.S. soil. The proposal is currently under Administration review.

Estimated Completion Date: NASA will continue to work with the Administration on acceptable language to present to Congress. Additionally, OPS will work in conjunction with OGC, the Office of the Chief Human Capital Officer (OCHCO), and the Office of the Chief Health and Medical Officer (OCHMO) to create consistent policy regarding specific physical and psychological testing requirements for NASA civil servants to carry firearms. Estimated completion is February 28, 2021.

Recommendation 6: In collaboration with the Office of Safety and Mission Assurance, evaluate fire services policies and functions Agency-wide, reconcile duties and responsibilities, and determine under which office—protective services or safety and mission—these responsibilities should reside.

Management's Response: NASA concurs with this recommendation. In late August of 2019, representatives from OPS, the Office of Safety and Mission Assurance (OSMA), [REDACTED]

[REDACTED] held an initial meeting to evaluate fire services policies and functions, specifically, the Authority Having Jurisdiction (AHJ) function which is a shared responsibility between OPS and OSMA. The meeting forged a path forward in laying the initial groundwork for establishing an agreement between the two organizations.

Estimated completion date: NASA estimates that an agreed-upon direction for the OPS operational structure will be decided by the third quarter of FY 2020 (April-June). This will enable OPS/OSMA inter-organizational fire services responsibilities to be finalized and enable an operational policy to be in place by August 31, 2020.

Recommendation 7: Establish an Agency-wide policy on calculating protective services costs associated with tenant reimbursable expenses.

Management's Response: NASA concurs with this recommendation. Although the current version of NPR 9090.1A, "*Reimbursable Agreements*" captures policy for calculating these types of costs in Chapter 3, the completion of the updates on the draft NPR 9090.1B will further clarify these and other costs and pricing related to reimbursable agreements.

Estimated Completion Date: March 31, 2020.

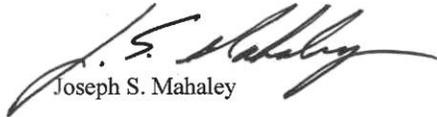
Recommendation 8: Develop procedures that require Center protective services officials to be a stakeholder in the planning process to meet protective services requirements for existing and new tenants.

Management's Response: NASA concurs with this recommendation. Under the current governance model, NASA Centers are the responsible stakeholders for the planning of all protective services requirements regarding tenants. It is OPS's intent for the Center Chiefs of Protective Services (CCPS) to have operational and budgetary inputs to the process regarding existing and new tenant and activity agreements via a Space Act agreement.

Estimated Completion Date: OPS will work with the Mission Support Directorate and Center leadership in the development of a process that will include the CCPS from planning to authorization in the Center tenant agreement process. Estimated completion date is September 30, 2020.

We have reviewed the draft report for information that should not be publicly released. As a result of this review, we have identified information that should not be publicly released and have communicated such to the OIG.

Once again, thank you for the opportunity to review and comment on the subject draft report. If you have any questions or require additional information regarding this response, please contact Mark Dodd, Executive Officer and Audit Liaison Representative, Office of Protective Services, on (202) 358-1255 or mark.r.dodd@nasa.gov.



Joseph S. Mahaley

APPENDIX D: REPORT DISTRIBUTION

National Aeronautics and Space Administration

Administrator
Deputy Administrator
Associate Administrator
Chief of Staff
Chief, Safety and Mission Assurance
General Counsel
Acting Associate Administrator for Mission Support Directorate
Assistant Administrator for Protective Services



Non-NASA Organizations and Individuals

Office of Management and Budget
Deputy Associate Director, Energy and Space Programs Division
Government Accountability Office
Director, Office of Contracting and National Security Acquisitions

Congressional Committees and Subcommittees, Chairman and Ranking Member

Senate Committee on Appropriations
Subcommittee on Commerce, Justice, Science, and Related Agencies
Senate Committee on Commerce, Science, and Transportation
Subcommittee on Aviation and Space
Senate Committee on Homeland Security and Governmental Affairs
House Committee on Appropriations
Subcommittee on Commerce, Justice, Science, and Related Agencies
House Committee on Oversight and Reform
Subcommittee on Government Operations
House Committee on Science, Space, and Technology
Subcommittee on Investigations and Oversight
Subcommittee on Space and Aeronautics

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