



Testimony

Before the Subcommittee on Border and
Maritime Security, Committee on
Homeland Security, House of
Representatives

For Release on Delivery
Expected at 2:00 p.m. ET
Thursday, March 15, 2018

BORDER SECURITY

Progress and Challenges with the Use of Technology, Tactical Infrastructure, and Personnel to Secure the Southwest Border

Statement of Rebecca Gambler, Director, Homeland
Security & Justice

Accessible Version

GAO Highlights

Highlights of [GAO-18-397T](#), a testimony before the Subcommittee on Border and Maritime Security, Committee on Homeland Security, House of Representatives

Why GAO Did This Study

DHS has employed a variety of technology, tactical infrastructure, and personnel assets to help secure the nearly 2,000 mile long southwest border. Since 2009, GAO has issued over 35 products on the progress and challenges DHS has faced in using technology, infrastructure, and other resources to secure the border. GAO has made over 50 recommendations to help improve DHS's efforts, and DHS has implemented more than half of them.

This statement addresses (1) DHS efforts to deploy and measure the effectiveness of surveillance technologies, (2) DHS efforts to maintain and assess the effectiveness of existing tactical infrastructure and to deploy new physical barriers, and (3) staffing challenges the Border Patrol has faced. This statement is based on three GAO reports issued in 2017, selected updates conducted in 2017, and ongoing work related to DHS acquisitions and the construction of physical barriers. For ongoing work GAO analyzed DHS and CBP documents, interviewed officials within DHS, and visited border areas in California.

What GAO Recommends

In recent reports, GAO made or reiterated recommendations for DHS to, among other things, assess the contributions of technology and fencing to border security. DHS generally agreed, and has actions planned or underway to address these recommendations.

View [GAO-18-397T](#). For more information, contact Rebecca Gambler at (202) 512-8777 or gambler@gao.gov.

March 2018

BORDER SECURITY

Progress and Challenges with the Use of Technology, Tactical Infrastructure, and Personnel to Secure the Southwest Border

What GAO Found

The U.S. Border Patrol, within the Department of Homeland Security's (DHS) U.S. Customs and Border Protection (CBP), has made progress deploying surveillance technology—a mix of radars, sensors, and cameras—along the southwest U.S. border. As of October 2017, the Border Patrol had completed the planned deployment of select technologies to several states along the southwest border. The Border Patrol has also made progress toward assessing performance of surveillance technologies, but additional actions are needed to fully implement GAO's 2011 and 2014 recommendations in this area. For example, the Border Patrol has not yet used available data to determine the contribution of surveillance technologies to border security efforts.

CBP spent about \$2.3 billion to deploy fencing from fiscal years 2007 through 2015 and constructed 654 miles of fencing by 2015. The Border Patrol has reported that border fencing supports agents' ability to respond to illicit cross-border activities by slowing the progress of illegal entrants. GAO reported in February 2017 that CBP was taking a number of steps in sustaining tactical infrastructure—such as fencing, roads, and lighting—along the southwest border. However, CBP has not developed metrics that systematically use data it collects to assess the contributions of border fencing to its mission, as GAO has recommended. CBP concurred with the recommendation and plans to develop metrics by January 2019. Further, CBP established the Border Wall System Program in response to a January 2017 executive order that called for the immediate construction of a southwest border wall. This program is intended to replace and add to existing barriers along the southwest border. In April 2017, DHS leadership gave CBP approval to procure barrier prototypes, which are intended to help inform new design standards for the border wall system.

Physical Barriers in San Diego, California, April 2016



Source: GAO. | GAO-18-397T

The Border Patrol has faced challenges in achieving a staffing level of 21,370 agents, the statutorily-established minimum from fiscal years 2011 through 2016. As of September 2017, the Border Patrol reported it had about 19,400 agents. GAO reported in November 2017 that Border Patrol officials cited staffing shortages as a challenge for optimal deployment. As a result, officials had to make decisions about how to prioritize activities for deployment given the number of agents available.

Chairwoman McSally, Ranking Member Vela, and Members of the Subcommittee:

I am pleased to be here today to discuss GAO's work reviewing the Department of Homeland Security's (DHS) efforts to deploy surveillance technology, tactical infrastructure, and personnel resources to the southwest border. This area continues to be vulnerable to illegal cross-border activity. The U.S. Border Patrol reported apprehending almost 304,000 illegal entrants and making over 11,600 drug seizures along the southwest border in fiscal year 2017. In January 2017, an executive order called for, among other things, the immediate construction of a southwest border wall and the hiring of 5,000 additional Border Patrol agents, subject to available appropriations.¹

The Border Patrol, within DHS's U.S. Customs and Border Protection (CBP), is the federal agency responsible for securing the national borders between U.S. ports of entry.² The Border Patrol divides responsibility for southwest border security operations geographically among nine sectors, and each sector is further divided into varying numbers of stations. To respond to cross-border threats, DHS has employed a combination of key resources, including surveillance technology, tactical infrastructure (which includes fencing, roads, and lighting), and Border Patrol agents. For example, DHS has deployed a variety of land-based surveillance technologies, such as cameras and sensors, which the Border Patrol uses to assist its efforts to secure the border and to apprehend individuals

¹Border Security and Immigration Enforcement Improvements, Exec. Order No. 13767, §§ 2, 8 (Jan. 25, 2017), 82 Fed. Reg. 8793, 8795 (Jan. 30, 2017). The executive order defines "wall" as a contiguous, physical wall or other similarly secure, contiguous, and impassable physical barrier.

²See 6 U.S.C. § 211(a) (establishing CBP within DHS), (c) (enumerating CBP's duties), (e) (establishing and listing duties of the U.S. Border Patrol within CBP). Ports of entry are facilities that provide for the controlled entry into or departure from the United States. Specifically, a port of entry is any officially designated location (seaport, airport, or land border location) where DHS officers or employees are assigned to clear passengers and merchandise, collect duties, and enforce customs laws, and where DHS officers inspect persons entering or applying for admission into, or departing the United States pursuant to U.S. immigration law and travel controls.

attempting to cross the border illegally.³ In addition, CBP spent approximately \$2.4 billion from fiscal years 2007 through 2015 to deploy tactical infrastructure, including about \$2.3 billion on fencing, at locations along the nearly 2,000 mile long southwest border. The Border Patrol deploys agents along the immediate border and in areas up to 100 miles from the border as part of a layered approach the agency refers to as the defense in depth strategy, and the Border Patrol reported it had 16,605 agents staffed at southwest border sectors at the end of fiscal year 2017.⁴

Since 2009 we have issued over 35 products on the progress DHS and its components have made and challenges it faces in using surveillance technology, tactical infrastructure, personnel, and other resources to secure the southwest border.⁵ As a result of this work, we have made over 50 recommendations to help improve DHS oversight over efforts to secure the southwest border, and DHS has implemented more than half of them. My statement describes (1) DHS efforts to deploy and measure the effectiveness of surveillance technologies, (2) DHS efforts to maintain and assess the effectiveness of existing tactical infrastructure and deploy new physical barriers, and (3) staffing challenges the Border Patrol has faced.

This statement is based on three reports we issued in 2017, and on selected updates we conducted in November and December 2017 on the Border Patrol's efforts to address some of our previous

³In November 2005, DHS launched the Secure Border Initiative (SBI) to develop a comprehensive border protection system using technology, known as the Secure Border Initiative Network (SBInet). Under the SBInet program, CBP acquired 15 fixed-tower systems at a cost of nearly \$1 billion, which are deployed along 53 miles of Arizona's 387-mile border with Mexico. In January 2011, in response to internal and external assessments that identified concerns, the Secretary of Homeland Security announced the cancellation of further procurements of SBInet surveillance systems. That same month, CBP introduced the Arizona Border Surveillance Technology Plan. In June 2014, CBP developed the Southwest Border Technology Plan, which incorporates the Arizona Technology Plan, and plans to extend land-based surveillance technology deployments to the remainder of the southwest border.

⁴As part of this strategy, the Border Patrol deploys some agents to activities along the immediate border while other agents may be assigned to activities further from the border, such as immigration checkpoint operations that are generally located on highways 25 to 100 miles from the border.

⁵See Related GAO Products page.

recommendations.⁶ This statement also includes preliminary observations and analyses from ongoing work related to the construction of new and replacement physical barriers along the southwest border and our fourth annual assessment of select DHS major acquisition programs.⁷ Our reports and testimonies, along with selected updates, incorporated information we obtained and analyzed from officials at various DHS components, and during site visits along the southwest border. More detailed information about our scope and methodology can be found in our published reports and testimonies. For ongoing work, we reviewed acquisition documents, such as CBP's Concept of Operations for Impedance and Denial, the Wall System Operational Requirements Document, and the Border Wall Prototype Test Plan. We also met with officials from DHS components, including CBP's Office of Facilities and Management and the Border Patrol, from September 2017 to January 2018. Further, in December 2017 we conducted a site visit to California to view existing tactical infrastructure and border wall prototypes that will inform the design of future physical barriers along the southwest border. All of our work was conducted 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.

CBP Has Made Progress Deploying Surveillance Technology along the Southwest

⁶GAO, *Southwest Border Security: Border Patrol Is Deploying Surveillance Technologies but Needs to Improve Data Quality and Assess Effectiveness*, [GAO-18-119](#) (Washington, D.C.: Nov. 30, 2017); *Southwest Border Security: Additional Actions Needed to Better Assess Fencing's Contributions and Provide Guidance for Identifying Capability Gaps*, [GAO-17-331](#) (Washington, D.C.: Feb. 16, 2017); *Border Patrol: Issues Related to Agent Deployment Strategy and Immigration Checkpoints*, [GAO-18-50](#) (Washington, D.C.: Nov. 8, 2017).

⁷We plan to complete the current annual assessment of DHS major acquisition programs in spring 2018. For the most recently published report, see: GAO, *Homeland Security Acquisitions: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress*, [GAO-17-346SP](#) (Washington, D.C.: Apr. 6, 2017). We plan to complete the review related to the construction of new and replacement physical barriers along the southwest border later this year.

Border, but Has Not Fully Assessed Effectiveness

On multiple occasions since 2011, we have reported on the progress the Border Patrol has made deploying technologies along the southwest border. Figure 1 shows the land-based surveillance technology systems used by the Border Patrol.

Figure 1: Border Surveillance Technology Systems Used by the Border Patrol**Integrated Fixed Towers (IFT)**

The system consists of radar and daylight and infrared cameras mounted on 80- to 160-foot-tall fixed towers. Power generation and communications equipment are linked to a command and control center.

**Unattended Ground Sensors and Imaging Sensors (UGS and I-UGS)**

The system consists of ground sensors and cameras to detect, track, identify, and differentiate humans, animals, and vehicles. Communications equipment links information captured by the system to a command and control center and can link directly to border patrol agents.

**Agent Portable Surveillance System (APSS)**

The system consists of radar, daylight and infrared cameras, and a laser illuminator. It is portable and is intended for use in areas where Border Patrol cannot deploy truck-mounted mobile systems. The system does not link to a command and control center.

**Thermal Imaging Device (TID)**

The system consists of a portable, handheld infrared camera and corresponding remote viewing kit that enables Border Patrol agents to see clearly up to 5 miles in areas that are dimly lit or in total darkness. The system does not link to a command and control center.

**Mobile Surveillance Capability (MSC)**

The system consists of radar, daylight and infrared cameras, a laser range finder, and a laser illuminator mounted 25 feet high on a truck. Power generation and communications equipment link the information captured by the system to the control station located within the cab of the truck, not to a command and control center; the information is displayed on multiple monitors for the operator to view.

**Remote Video Surveillance System (RVSS)**

The system consists of multiple daylight and infrared cameras and a laser illuminator mounted on 30- to 90-foot-tall monopoles, 120-foot-tall fixed towers and buildings. Command and control center linked with communications equipment. Unlike IFT, RVSS does not include radar capability.

**Relocatable RVSS**

The system consists of multiple daylight and infrared cameras and a laser illuminator mounted on an 80-foot-tall tower, which is on a steel platform trailer and can be relocated to other sites. The system links to a modular command and control center.

**Mobile Video Surveillance System (MVSS)**

The system consists of a lift system that elevates daylight and infrared cameras, a laser range finder, and a laser illuminator. Power generation and communications equipment link the information captured by the system to the control station located within the cab of the truck, not to a command and control center; the information is displayed on a single monitor for the operator to view. Unlike MSC, MVSS does not include radar capability.

Source: GAO analysis of U.S. Customs and Border Protection (CBP) information; CBP (photos); GAO (photos). | GAO-18-397T

In November 2017, we reported on the progress the Border Patrol made deploying technology along the southwest border in accordance with its 2011 Arizona Technology Plan and 2014 Southwest Border Technology Plan.⁸ For example, we reported that, according to officials, the Border Patrol had completed deployments of all planned Remote Video Surveillance Systems (RVSS), Mobile Surveillance Capability systems, and Unattended Ground Sensors, as well as 15 of 53 Integrated Fixed Tower systems to Arizona. The Border Patrol had also completed deployments of select technologies to Texas and California, including deploying 32 Mobile Surveillance Capability systems. In addition, the Border Patrol had efforts underway to deploy other technology programs, but at the time of our report, some of those programs had not yet begun deployment or were not yet under contract. For example, we reported that, according to the Border Patrol officials responsible for the RVSS program, the Border Patrol had begun planning the designs of the command and control centers and towers for the Rio Grande Valley sector in Texas. Further, we reported that the Border Patrol had not yet initiated deployments of RVSS to Texas because, according to Border Patrol officials, the program had only recently completed contract negotiations for procuring those systems. Additionally, the Border Patrol initially awarded the contract to procure and deploy Mobile Video Surveillance System units to Texas in 2014, but did not award the contract until 2015 because of bid and size protests, and the vendor that was awarded the contract did not begin work until March 2016.⁹ Our November 2017 report includes more detailed information about the deployment status of surveillance technology along the southwest border as of October 2017.

We also reported in November 2017 that the Border Patrol had made progress identifying performance metrics for the technologies deployed along the Southwest Border, but additional actions are needed to fully implement our prior recommendations in this area. For example, in November 2011, we found that CBP did not have the information needed to fully support and implement the Arizona Technology Plan and recommended that CBP (1) determine the mission benefits to be derived

⁸[GAO-18-119](#).

⁹A bid protest, filed with GAO, is a dispute in which the protester alleges that a federal agency has not complied with statutes and regulations controlling government procurements. A size protest, filed with the Small Business Administration, is a challenge of the determination that an awardee of a small business set-aside contract meets the definition of "small business" in order to be eligible for the set-aside.

from implementation of the Arizona Technology Plan and (2) develop and apply key attributes for metrics to assess program implementation.¹⁰ CBP concurred with our recommendations and has implemented one of them. Specifically, in March 2014, we reported that CBP had identified mission benefits of its surveillance technologies to be deployed along the southwest border, such as improved situational awareness and agent safety. However, the agency had not developed key attributes for performance metrics for all surveillance technologies to be deployed.¹¹

Further, we reported in March 2014 that CBP did not capture complete data on the contributions of these technologies. When used in combination with other relevant performance metrics or indicators, these data could be used to better determine the impact of CBP's surveillance technologies on CBP's border security efforts and inform resource allocation decisions. Therefore, we recommended that CBP (1) require data on technology contributions to apprehensions or seizures to be tracked and recorded within its database and (2) subsequently analyze available data on apprehensions and technological assists—in combination with other relevant performance metrics or indicators, as appropriate—to determine the contribution of surveillance technologies. CBP concurred with our recommendations and has implemented one of them. Specifically, in June 2014, the Border Patrol issued guidance informing agents that the asset assist data field—which records assisting technology or other assets (canine teams)—in its database had become a mandatory data field.

While the Border Patrol has taken action to collect data on technology, it has not taken additional steps to determine the contribution of surveillance technologies to CBP's border security efforts. In April 2017, we reported that the Border Patrol had provided us a case study that assessed technology assist data, along with other measures, to determine the contributions of surveillance technologies to its mission.¹² We reported that this was a helpful step in developing and applying

¹⁰GAO, *Arizona Border Surveillance Technology: More Information on Plans and Costs Is Needed before Proceeding*, [GAO-12-22](#) (Washington, D.C.: Nov. 4, 2011).

¹¹GAO, *Arizona Border Surveillance Technology Plan: Additional Actions Needed to Strengthen Management and Assess Effectiveness*, [GAO-14-368](#) (Washington, D.C.: Mar. 3, 2014).

¹²GAO, *2017 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits*, [GAO-17-491SP](#) (Washington, D.C.: Apr. 26, 2017).

performance metrics; however, the case study was limited to one border location and the analysis was limited to select technologies. In November 2017, we reported that Border Patrol officials demonstrated the agency's new Tracking, Sign Cutting, and Modeling (TSM) system, which they said is intended to connect between agents' actions (such as identification of a subject through the use of a camera) and results (such as an apprehension) and allow for more comprehensive analysis of the contributions of surveillance technologies to the Border Patrol's mission. One official said that data from the TSM will have the potential to provide decision makers with performance indicators, such as changes in apprehensions or traffic before and after technology deployments. However, at the time of our review, TSM was still early in its use and officials confirmed that it was not yet used to support such analytic efforts. We continue to believe that it is important for the Border Patrol to assess technologies' contributions to border security and will continue to monitor the progress of the TSM and other Border Patrol efforts to meet our 2011 and 2014 recommendations.

CBP Is Planning to Construct New Physical Barriers, but Has Not Yet Assessed the Impact of Existing Fencing

Fencing Is Intended to Assist Agents in Performing Their Duties, but Its Contributions to Border Security Operations Have Not Been Assessed

We have reported on the significant investments CBP has made in tactical infrastructure along the southwest border. The Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), as amended, provides that the Secretary of Homeland Security shall take actions, as necessary, to install physical barriers and roads in the vicinity of the border to deter illegal crossings in areas of high illegal entry.¹³ The Secure Fence Act of 2006, in amending IIRIRA, required DHS to construct at least two layers of reinforced fencing as well as physical barriers, roads, lighting, cameras, and sensors on certain segments of the

¹³Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. No. 104-208, div. C, tit. I, subtit. A, § 102(a), 110 Stat. 3009, 3009-554 (classified, as amended, at 8 U.S.C. § 1103 note).

southwest border.¹⁴ From fiscal years 2005 through 2015, CBP increased the total miles of primary border fencing on the southwest border from 119 miles to 654 miles—including 354 miles of primary pedestrian fencing and 300 miles of primary vehicle fencing.¹⁵ In addition, CBP has deployed additional layers of pedestrian fencing behind the primary border fencing, including 37 miles of secondary fencing.¹⁶ From fiscal years 2007 through 2015, CBP spent approximately \$2.4 billion on tactical infrastructure on the southwestern border—and about 95 percent, or around \$2.3 billion, was spent on constructing pedestrian and vehicle fencing. CBP officials reported it will need to spend additional amounts to sustain these investments over their lifetimes. In 2009, CBP estimated that maintaining fencing would cost more than \$1 billion over 20 years.¹⁷ CBP used various fencing designs to construct the 654 miles of primary pedestrian and vehicle border fencing. Figure 2 shows examples of existing pedestrian fencing deployed along the border.

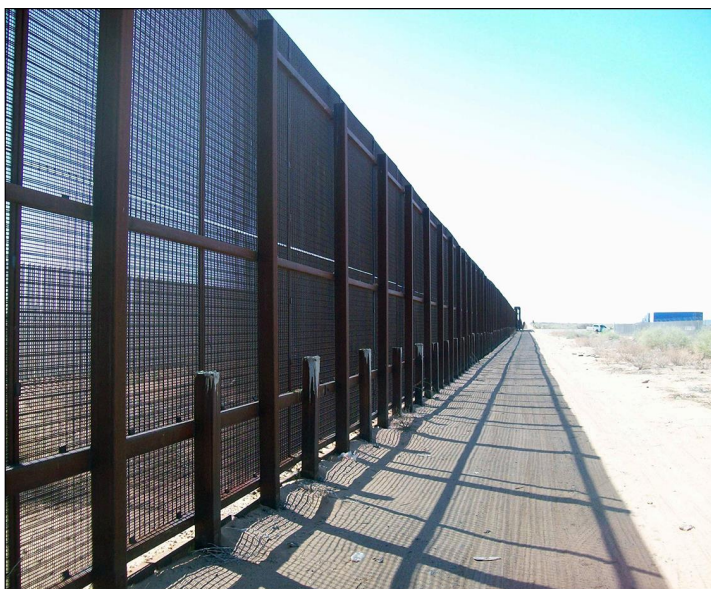
¹⁴See Pub. L. No. 109-367, § 3, 120 Stat. 2638, 2638-2639. Under the Secure Fence Act of 2006, the Secretary of Homeland Security is to achieve and maintain operational control over the borders of the United States through surveillance activities and physical infrastructure enhancements to prevent unlawful entry by aliens and facilitate CBP's access to the borders. See id. § 2, 120 Stat. at 2638 (classified at 8 U.S.C. § 1701 note). Subsequently, the DHS Appropriations Act, 2008, rewrote the border fencing requirements section of IIRIRA to require that DHS construct not less than 700 miles of reinforced fencing along the southwest border where fencing would be most practical and effective, and to provide for the installation of additional physical barriers, roads, lighting, cameras, and sensors to gain operational control of the southwest border. IIRIRA § 102(b), 110 Stat. at 3009-554 to -555, as amended by Pub. L. No. 110-161, div. E, tit. V, § 564(a)(2)(B)(ii), 121 Stat. 1844, 2090-91 (2007) (classified at 8 U.S.C. § 1103 note). IIRIRA § 102(b), as amended, also gives the Secretary of Homeland Security discretion to install tactical infrastructure in particular locations along the border, as deemed appropriate. Id.

¹⁵See 8 U.S.C. § 1103 note (notwithstanding fencing requirements, DHS is not required to install fencing or other resources in a particular location along the border if the Secretary of Homeland Security determines that the use or placement of such resources is not the most appropriate means to achieve and maintain operational control over the border at that location).

¹⁶The first layer of fencing, the primary fence, may include both pedestrian and vehicle fencing and is the first fence encountered when moving north from the border; the secondary fence, located behind the primary fence, consists solely of pedestrian fencing; and the third layer, or tertiary fence, is primarily used to delineate property lines rather than deter illegal entries.

¹⁷CBP's 2009 life cycle cost estimate estimated operations and maintenance costs for fencing would be approximately \$1.4 billion from 2009 through 2029.

Figure 2: Selected Designs of Existing Pedestrian Fencing on the Southwest Border



Double steel mesh style pedestrian fence



Bollard style pedestrian fence



Expanded metal style pedestrian fence



Landing mat style pedestrian fence

Source: GAO. | GAO-18-397T

Note: For the purposes of this statement, we refer to fencing constructed prior to January 2017 as “existing” fencing or barriers. A January 2017 executive order called for the immediate construction of a “contiguous, physical wall or other similarly secure, contiguous, and impassable physical barrier” and CBP is assessing prototypes to inform future designs of barriers. See Exec. Order No. 13767, § 2 (Jan. 25, 2017), 82 Fed. Reg. 8793 (Jan. 30, 2017).

In February 2017, we reported that border fencing had benefited border security operations in various ways, according to the Border Patrol.¹⁸ For example, according to officials, border fencing improved agent safety, helped reduce vehicle incursions, and supported Border Patrol agents' ability to respond to illicit cross-border activities by slowing the progress of illegal entrants. However, we also found that, despite its investments over the years, CBP could not measure the contribution of fencing to border security operations along the southwest border because it had not developed metrics for this assessment. We reported that CBP collected data that could help provide insight into how border fencing contributes to border security operations. For example, we found that CBP collected data on the location of illegal entries that could provide insight into where these illegal activities occurred in relation to the location of various designs of pedestrian and vehicle fencing. We reported that CBP could potentially use these data to compare the occurrence and location of illegal entries before and after fence construction, as well as to help determine the extent to which border fencing contributes to diverting illegal entrants into more rural and remote environments, and border fencing's impact, if any, on apprehension rates over time. Therefore, we recommended in February 2017 that the Border Patrol develop metrics to assess the contributions of pedestrian and vehicle fencing to border security along the southwest border using the data the Border Patrol already collects and apply this information, as appropriate, when making investment and resource allocation decisions. The agency concurred with our recommendation. As of December 2017, officials reported that CBP plans to establish initial metrics by March 2018 and finalize them in January 2019.

CBP Faces Challenges in Sustaining Tactical Infrastructure and Has Not Provided Guidance on Its Process for Identifying and Deploying Tactical Infrastructure

In February 2017, we also reported that CBP was taking a number of steps to sustain tactical infrastructure along the southwest border; however, it continued to face certain challenges in maintaining this infrastructure.¹⁹ For example, CBP had funding allocated for tactical

¹⁸[GAO-17-331](#).

¹⁹For the purpose of this statement, sustainment refers to the maintenance, repair, and replacement of tactical infrastructure.

infrastructure sustainment requirements, but had not prioritized its requirements to make the best use of available funding, since CBP also required contractors to address urgent repair requirements. According to Border Patrol officials, CBP classifies breaches to fencing, grates, or gates as urgent and requiring immediate repair because breaches increase illegal entrants' ability to enter the country unimpeded. At the time of our February 2017 review, the majority of urgent tactical infrastructure repairs on the southwest border were fence breaches, according to Border Patrol officials. From fiscal years 2010 through 2015, CBP recorded a total of 9,287 breaches in pedestrian fencing, and repair costs averaged \$784 per breach.

While contractors provide routine maintenance and address urgent repairs on tactical infrastructure, certain tactical infrastructure assets used by the Border Patrol—such as border fencing—become degraded beyond repair and must be replaced. For example, in February 2017 we reported that CBP had provided routine maintenance and repair services to the primary legacy pedestrian fencing in Sunland Park, New Mexico. However, significant weather events had eroded the foundation of the fencing, according to the Border Patrol officials in the El Paso sector, and in 2015 CBP began to replace 1.4 miles of primary pedestrian fence in this area. We also reported on several additional CBP projects to replace degraded, legacy pedestrian fencing with more modern, bollard style fencing. For example, in fiscal year 2016, CBP began removing and replacing an estimated 7.5 miles of legacy primary pedestrian fencing with modern bollard style fencing within the Tucson sector. In addition, from fiscal years 2011 through 2016, CBP completed four fence replacement projects that replaced 14.1 miles of primary pedestrian legacy fencing in the Tucson and Yuma sectors at a total cost of approximately \$68.26 million and an average cost of \$4.84 million per mile of replacement fencing. We plan to provide information on additional fence replacement projects in a forthcoming report.

In 2014, the Border Patrol began implementing the Requirements Management Process that is designed to facilitate planning for funding and deploying tactical infrastructure and other requirements, according to Border Patrol officials. At the time of our February 2017 review, Border Patrol headquarters and sector officials told us that the Border Patrol lacked adequate guidance for identifying, funding, and deploying tactical infrastructure needs as part of this process. In addition, officials reported experiencing some confusion about their roles and responsibilities in this process. We reported that developing guidance on this process would provide more reasonable assurance that the process is consistently

followed across the Border Patrol. We therefore recommended that the Border Patrol develop and implement written guidance to include roles and responsibilities for the steps within its requirements process for identifying, funding, and deploying tactical infrastructure assets for border security operations. The agency concurred with this recommendation and stated that it planned to update the Requirements Management Process and, as part of that update, planned to add communication and training methods and tools to better implement the process. As of December 2017, DHS plans to complete these efforts by September 2019.

CBP Has Tested Barrier Prototypes and Plans to Construct New Barriers in San Diego and Rio Grande Valley Sectors

In response to the January 2017 Executive Order, CBP established the Border Wall System Program to replace and add to existing barriers along the southwest border. In April 2017, DHS leadership authorized CBP to procure barrier prototypes, which are intended to help refine requirements and inform new or updated design standards for the border wall system. CBP subsequently awarded eight contracts with a total value of \$5 million for the construction, development, and testing of the prototypes. From October to December 2017, CBP tested eight prototypes—four constructed from concrete and four from other materials—and evaluated them in five areas: breachability, scalability, constructability, design, and aesthetics. CBP officials said the prototype evaluation results are expected by March 2018.

CBP has selected the San Diego and Rio Grande Valley sectors for the first two segments of the border wall system. In the San Diego sector, CBP plans to replace 14 miles of existing primary and secondary barriers. The primary barriers will be rebuilt to existing design standards, but the secondary barriers will be rebuilt to new design standards once established. In the Rio Grande Valley sector, CBP plans to extend an existing barrier by 60 miles using existing design standards. CBP intends to prioritize construction of new or replacement physical barriers based on threat levels, land ownership, and geography, among other things. We have ongoing work reviewing the Border Wall System Program, and we plan to report on the results of that work later this year.

The Border Patrol Has Continued to Face Staffing Challenges

In November 2017 we reported that, in fiscal years 2011 through 2016, the Border Patrol had statutorily-established minimum staffing levels of 21,370 full-time equivalent agent positions, but the Border Patrol has faced challenges in staffing to that level.²⁰ Border Patrol headquarters, with input from the sectors, determines how many authorized agent positions are allocated to each of the sectors. According to Border Patrol officials, these decisions take into account the relative needs of the sectors, based on threats, intelligence, and the flow of illegal activity. Each sector's leadership determines how many of the authorized agent positions will be allocated to each station within their sector.

At the end of fiscal year 2017, the Border Patrol reported it had over 19,400 agents on board nationwide, and that over 16,600 of the agents were staffed to sectors along the southwest border. As mentioned earlier, the January 2017 executive order called for the hiring of 5,000 additional Border Patrol agents, subject to available appropriations, and as of November 2017 we reported that the Border Patrol planned to have 26,370 agents by the end of fiscal year 2021. The Acting Commissioner of CBP reported in a February 2017 memo to the Deputy Secretary for Homeland Security that from fiscal year 2013 to fiscal year 2016, the Border Patrol hired an average of 523 agents per year while experiencing

²⁰GAO-18-50. Department of Defense and Full-Year Continuing Appropriations Act, 2011, Pub. L. No. 112-10, div. B, tit. VI, § 1608, 125 Stat. 38, 140; Consolidated Appropriations Act, 2012, Pub. L. No. 112-74, div. D, tit. II, 125 Stat. 786, 946 (2011); Consolidated and Further Continuing Appropriations Act, 2013, Pub. L. No. 113-6, div. D, tit. II, 127 Stat. 198, 345; Consolidated Appropriations Act, 2014, Pub. L. No. 113-76, div. F, tit. II, 128 Stat. 5, 249; Department of Homeland Security Appropriations Act, 2015, Pub. L. No. 114-4, tit. II, 129 Stat. 39, 41; Consolidated Appropriations Act, 2016, Pub. L. No. 114-113, div. F, tit. II, 129 Stat. 2242, 2495 (2015). For fiscal year 2017, the Consolidated Appropriations Act, 2017, did not include the provision from prior years mandating a workforce floor for Border Patrol agents, but the accompanying explanatory statement directed CBP to continue working to develop a fully justified workforce staffing model that would provide validated requirements for all U.S. borders and to brief the appropriations committees on its progress in this regard within 30 days of the enactment of the Consolidated Appropriations Act (enacted May 5, 2017). See Explanatory Statement, 163 Cong. Rec. H3327, H3809-10 (daily ed. May 3, 2017), accompanying Pub. L. No. 115-31, 131 Stat. 135 (2017).

a loss of an average of 904 agents per year.²¹ The memo cited challenges such as competing with other federal, state, and local law enforcement organizations for applicants. In particular, the memo noted that CBP faces hiring and retention challenges compared to DHS's U.S. Immigration and Customs Enforcement (which is also planning to hire additional law enforcement personnel) because CBP's hiring process requires applicants to take a polygraph examination, Border Patrol agents are deployed to less desirable duty locations, and Border Patrol agents generally receive lower compensation.

In November 2017, we reported that the availability of agents is one key factor that affects the Border Patrol's deployment strategy. In particular, officials from all nine southwest border sectors cited current staffing levels and the availability of agents as a challenge for optimal deployment. We reported that, as of May 2017, the Border Patrol had 17,971 authorized agent positions in southwest border sectors, but only 16,522 of those positions were filled—a deficit of 1,449 agents—and eight of the nine southwest border sectors had fewer agents than the number of authorized positions. As a result of these staffing shortages, resources were constrained and station officials had to make decisions about how to prioritize activities for deployment given the number of agents available.

We also reported in November 2017 that within sectors, some stations may be comparatively more understaffed than others because of recruitment and retention challenges, according to officials. Generally, sector officials said that the recruitment and retention challenges associated with particular stations were related to quality of life factors in the area near the station—for example, agents may not want to live with their families in an area without a hospital, with low-performing schools, or with relatively long commutes from their homes to their duty station. This can affect retention of existing agents, but it may also affect whether a new agent accepts a position in that location. For example, officials in one sector said that new agent assignments are not based solely on agency need, but rather also take into consideration agent preferences. These officials added that there is the potential that new agents may decline offers for stations that are perceived as undesirable, or they may resign their position earlier than they otherwise would to pursue employment in a more desirable location. We have ongoing work reviewing CBP's efforts

²¹The Acting Commissioner's memo outlines plans and requests to assist the Border Patrol in hiring more agents, including the additional 5,000 agents called for in the Executive Order on Border Security and Immigration Enforcement Improvements.

to recruit, hire, and retain its law enforcement officers, including Border Patrol agents.

Chairwoman McSally, Ranking Member Vela, and Members of the Subcommittee, this concludes my prepared statement. I will be happy to answer any questions you may have.

GAO Contact and Staff Acknowledgments

For questions about this statement, please contact Rebecca Gambler at (202) 512-8777 or gambler@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals making key contributions to this testimony are Jeanette Henriquez (Assistant Director), Leslie Sarapu (Analyst-in-Charge), Ashley Davis, Alana Finley, Tom Lombardi, Marycella Mierez, and Claire Peachey.

Related GAO Products

Southwest Border Security: Border Patrol Is Deploying Surveillance Technologies but Needs to Improve Data Quality and Assess Effectiveness. GAO-18-119. Washington, D.C.: November 30, 2017.

Border Patrol: Issues Related to Agent Deployment Strategy and Immigration Checkpoints. GAO-18-50. Washington, D.C.: November 8, 2017.

2017 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits. GAO-17-491SP. Washington, D.C.: April 26, 2017.

Homeland Security Acquisitions: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress. GAO-17-346SP. Washington, D.C.: April 6, 2017.

Southwest Border Security: Additional Actions Needed to Better Assess Fencing's Contributions to Operations and Provide Guidance for Identifying Capability Gaps. GAO-17-331. Washington, D.C.: February 16, 2017.

Southwest Border Security: Additional Actions Needed to Better Assess Fencing's Contributions to Operations and Provide Guidance for Identifying Capability Gaps. GAO-17-167SU. Washington, D.C.: December 22, 2016.

Border Security: DHS Surveillance Technology, Unmanned Aerial Systems and Other Assets. GAO-16-671T. Washington, D.C.: May 24, 2016.

2016 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits. GAO-16-375SP. Washington, D.C.: April 13, 2016.

Homeland Security Acquisitions: DHS Has Strengthened Management, but Execution and Affordability Concerns Endure. GAO-16-338SP. Washington, D.C.: March 31, 2016.

Southwest Border Security: Additional Actions Needed to Assess Resource Deployment and Progress. GAO-16-465T. Washington, D.C.: March 1, 2016.

Border Security: Progress and Challenges in DHS's Efforts to Implement and Assess Infrastructure and Technology. GAO-15-595T. Washington, D.C.: May 13, 2015.

Homeland Security Acquisitions: Addressing Gaps in Oversight and Information is Key to Improving Program Outcomes. GAO-15-541T. Washington, D.C.: April 22, 2015.

Homeland Security Acquisitions: Major Program Assessments Reveal Actions Needed to Improve Accountability. GAO-15-171SP. Washington, D.C.: April 22, 2015.

2015 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits. GAO-15-404SP. Washington, D.C.: April 14, 2015.

Arizona Border Surveillance Technology Plan: Additional Actions Needed to Strengthen Management and Assess Effectiveness. GAO-14-411T. Washington, D.C.: March 12, 2014.

Arizona Border Surveillance Technology Plan: Additional Actions Needed to Strengthen Management and Assess Effectiveness. GAO-14-368. Washington, D.C.: March 3, 2014.

Border Security: Progress and Challenges in DHS Implementation and Assessment Efforts. GAO-13-653T. Washington, D.C.: June 27, 2013.

Border Security: DHS's Progress and Challenges in Securing U.S. Borders. GAO-13-414T. Washington, D.C.: March 14, 2013.

Border Patrol: Key Elements of New Strategic Plan Not Yet in Place to Inform Border Security Status and Resource Needs. GAO-13-25. Washington, D.C.: December 10, 2012.

U.S. Customs and Border Protection's Border Security Fencing, Infrastructure and Technology Fiscal Year 2011 Expenditure Plan. GAO-12-106R. Washington, D.C.: November 17, 2011.

Arizona Border Surveillance Technology: More Information on Plans and Costs Is Needed before Proceeding. GAO-12-22. Washington, D.C.: November 4, 2011.

Homeland Security: DHS Could Strengthen Acquisitions and Development of New Technologies. GAO-11-829T. Washington, D.C.: July 15, 2011.

Border Security: DHS Progress and Challenges in Securing the U.S. Southwest and Northern Borders. GAO-11-508T. Washington, D.C.: March 30, 2011.

Border Security Preliminary Observations on the Status of Key Southwest Border Technology Programs. GAO-11-448T. Washington, D.C.: March 15, 2011.

Secure Border Initiative: DHS Needs to Strengthen Management and Oversight of Its Prime Contractor. GAO-11-6. Washington, D.C.: October 18, 2010.

U.S. Customs and Border Protection's Border Security Fencing, Infrastructure and Technology Fiscal Year 2010 Expenditure Plan. GAO-10-877R. Washington, D.C.: July 30, 2010.

Department of Homeland Security: Assessments of Selected Complex Acquisitions, GAO-10-588SP. Washington, D.C.: June 30, 2010.

Secure Border Initiative: DHS Needs to Reconsider Its Proposed Investment in Key Technology Program. GAO-10-340. Washington, D.C.: May, 5, 2010.

Secure Border Initiative: DHS Has Faced Challenges Deploying Technology and Fencing Along the Southwest Border, GAO-10-651T. Washington, D.C.: May 4, 2010.

Secure Border Initiative: Testing and Problem Resolution Challenges Put Delivery of Technology Program at Risk. GAO-10-511T. Washington, D.C.: March 18, 2010.

Secure Border Initiative: DHS Needs to Address Testing and Performance Limitations That Place Key Technology Program at Risk. GAO-10-158. Washington, D.C.: January 29, 2010.

Secure Border Initiative: Technology Deployment Delays Persist and the Impact of Border Fencing Has Not Been Assessed. GAO-09-1013T. Washington, D.C.: September 17, 2009.

Secure Border Initiative: Technology Deployment Delays Persist and the Impact of Border Fencing Has Not Been Assessed. GAO-09-896. Washington, D.C.: September 9, 2009.

Border Patrol: Checkpoints Contribute to Border Patrol's Mission, but More Consistent Data Collection and Performance Measurement Could Improve Effectiveness. GAO-09-824. Washington, D.C.: August 31, 2009.

Customs and Border Protection's Secure Border Initiative Fiscal Year 2009 Expenditure Plan. GAO-09-274R. Washington, D.C.: April 30, 2009.

Secure Border Initiative Fence Construction Costs. GAO-09-244R. Washington, D.C.: January 29, 2009.

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<https://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <https://www.gao.gov> and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <https://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).
Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#).
Visit GAO on the web at <https://www.gao.gov>.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: <https://www.gao.gov/fraudnet/fraudnet.htm>
E-mail: fraudnet@gao.gov
Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Orice Williams Brown, Managing Director, WilliamsO@gao.gov, (202) 512-4400,
U.S. Government Accountability Office, 441 G Street NW, Room 7125,
Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

Strategic Planning and External Liaison

James-Christian Blockwood, Managing Director, spel@gao.gov, (202) 512-4707
U.S. Government Accountability Office, 441 G Street NW, Room 7814,
Washington, DC 20548