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OFFICE OF INSPECTOR GENERAL

# TSA's Challenges with Passenger Screening Canine Teams (REDACTED)

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April 28, 2020

OIG-20-28



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# DHS OIG HIGHLIGHTS

## TSA's Challenges with Passenger Screening Canine Teams

April 28, 2020

### Why We Did This Audit

In fiscal year 2018, the Transportation Security Administration (TSA) spent nearly \$77 million for 287 Passenger Screening Canine (PSC) teams to screen passengers and baggage for explosive odors at airport security checkpoints. We conducted this review to determine whether TSA deployed PSC teams as necessary to fulfill its layered approach for passenger aircraft security and detect a variety of explosive items to safeguard the traveling public.

### What We Recommend

We made two recommendations that, if implemented, should help TSA improve oversight of its PSC teams, formalize its canine allocation methodology, validate its canine management decisions, and improve internal controls.

#### For Further Information:

Contact our Office of Public Affairs at (202) 981-6000, or email us at [DHS-OIG.OfficePublicAffairs@oig.dhs.gov](mailto:DHS-OIG.OfficePublicAffairs@oig.dhs.gov).

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### What We Found

TSA cannot show deployment and use of its PSC teams provide effective security at passenger screening checkpoints. Specifically, TSA:

- has not determined the number of teams needed to provide security and mitigate risks because it does not identify and document mission needs, capability gaps, and operational goals for deploying the teams;
- may not be allocating PSC teams to the highest risk airports because it does not properly justify and document allocation decisions;
- has not determined whether the limited use of PSC teams provides sufficient security because it cannot justify the teams as the best, most cost-effective checkpoint security; and
- cannot be assured airports are using PSC teams properly because it does not adequately oversee TSA management operations at airports.

We also found canines on TSA's PSC teams may not detect [REDACTED]

[REDACTED] in an operational environment. This is due to canines having inherent limitations, restricting TSA's ability to train PSCs to detect all significant explosive threats. As a result, our Nation's aviation system and the traveling public could be at risk of a catastrophic event caused by an undetected explosive device. TSA could have redirected nearly \$77 million spent on PSC teams in fiscal year 2018 to other security programs and activities to better protect the aviation system.

### TSA Response

TSA concurred with both recommendations.

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Washington, DC 20528 / [www.oig.dhs.gov](http://www.oig.dhs.gov)

April 28, 2020

MEMORANDUM FOR: Darby LaJoye  
Executive Assistant Administrator  
Security Operations  
Transportation Security Administration

FROM: Sondra F. McCauley   
Assistant Inspector General for Audits

SUBJECT: *TSA's Challenges with Passenger Screening Canine Teams – ~~Sensitive Security Information~~*

Attached for your action is our final report, *TSA's Challenges with Passenger Screening Canine Teams – ~~Sensitive Security Information~~*. We incorporated the formal comments provided by your office.

The report contains two recommendations aimed at improving the overall effectiveness of TSA's Passenger Screening Canine teams. Your office concurred with both recommendations. Based on information provided in your response to the draft report, we consider recommendations 1 and 2 open and resolved. Once your office has fully implemented the recommendations, please submit a formal closeout letter to us within 30 days so that we may close the recommendations. The memorandum should be accompanied by evidence of completion of agreed-upon corrective actions and of the disposition of any monetary amounts. Please send your response or closure request to [OIGAuditsFollowup@oig.dhs.gov](mailto:OIGAuditsFollowup@oig.dhs.gov)

Consistent with our responsibility under the *Inspector General Act*, we will provide copies of our report to congressional committees with oversight and appropriation responsibility over the Department of Homeland Security. We will post a redacted version of the report on our website.

Please call me with any questions, or your staff may contact Don Bumgardner, Deputy Assistant Inspector General for Audits, at (202) 981-6000.

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**Abbreviations**

CETA	Canine Explosives Training Aid
DSARM	Detection Standard Analysis and Revision Methodology
FSD	Federal Security Director
MAP	Measures of Accountability and Productivity
NEDCTP	National Explosives Detection Canine Team Program
OIG	Office of Inspector General
PSC	Passenger Screening Canine
SNA	Short Notice Assessment
TSA	Transportation Security Administration



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## Background

In 1972, the Federal Aviation Administration initiated the use of explosive detection canine teams in partnership with state and local law enforcement agencies with jurisdiction over airports. In March 2003, the Federal Aviation Administration transferred its canine program to the Transportation Security Administration (TSA) upon creation of the Department of Homeland Security.<sup>1</sup> TSA established its National Explosives Detection Canine Team Program (NEDCTP) to detect and deter the introduction of explosives into the Nation's transportation system.

TSA expanded the program in 2011 from primarily cargo screening using law enforcement handlers to include Transportation Security Inspector handlers at airports with Passenger Screening Canines (PSC) trained to detect explosives. As a primary function, PSC teams operate [REDACTED] security checkpoints by screening passengers and carry-on baggage to detect explosive odors using a canine's sense of smell. Once a canine detects an odor, it exhibits a change of behavior, which is interpreted by a handler who then conducts a search to identify the source of the odor. Figure 1 shows a canine in training. According to DHS officials, TSA added PSC teams at checkpoints in response to the Christmas day 2009 bombing attempt by a male traveler who concealed an explosive in his clothing, but failed to detonate it during the flight.



**Figure 1: Passenger Screening Canine**

Source: DHS Office of Inspector General (OIG)

In fiscal year 2018, TSA obligated about \$152 million for NEDCTP, which comprised 1,047 explosive detection canine teams across the Nation. The teams included 675 canines handled by state and local law enforcement officers. The remaining 372 canines were designated as PSC teams. TSA oversees the teams to ensure they comply with current TSA explosive detection

<sup>1</sup> *Homeland Security Act of 2002*, Pub. L. No. 107-296 (2002).



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standards. A canine team is composed of a handler and a canine. A handler is trained to detect changes in a canine's behavior or action signifying a potential explosive during Canine Enhanced Screenings. This screening process involves the deployment of a PSC team to screen passengers and their baggage at checkpoints for explosive odors in accordance with TSA's *Proprietary Canine Manual*<sup>2</sup> and Screening Checkpoint Standard Operating Procedures.

In FY 2018, TSA reported spending nearly \$77 million in costs associated with its PSC teams. The expenses included personnel compensation and benefits as well as travel and lodging for the PSC teams. As of October 2018, TSA had 287 PSC teams deployed and operating at airports. Deployed and operational PSC teams are assigned to an airport and are currently certified to conduct screening activities at security checkpoints. The teams were located at 47 of 449 (10 percent) primarily Category X and I domestic airports, which TSA considers to be the highest risk.<sup>3</sup> See appendix C for a breakout of PSC teams by airport. In FY 2019, Congress funded an additional 50 PSC teams, bringing TSA's total authorized PSC teams to 422.<sup>4</sup>

In FY 2018, initial start-up and maintenance costs for each PSC team were approximately \$227,000 and \$145,900, respectively. The costs are included in the \$77 million TSA reported spending in FY 2018. See table 1.

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<sup>2</sup> TSA's *Proprietary Canine Manual*, Revision 9.2, July 18, 2017.

<sup>3</sup> TSA classifies commercial airports in the United States into one of five security-risk categories (X, I, II, III, and IV), based on factors such as the total number of annual enplanements and other security program requirements. In general, Category X airports have the greatest number of passenger boardings while Category IV airports have the least.

<sup>4</sup> TSA is budgeted for a specific number of PSC teams. However, it hires additional teams because of canine and handler attrition.



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**Table 1: FY 2018 Total Costs for a PSC Team**

Item	FY 2018	
	Initial Cost	Maintenance Cost
Canine ( <i>procurement, supplies, food, kennels, veterinarian</i> )	\$ 16,000	\$ 3,000
Handler (Personnel Compensation and Benefits)	125,000	127,500
Training ( <i>Canine Training Center, certifications, role players, Canine Explosives Training Aids, bags</i> )	71,000	7,400
Administrative ( <i>laptops, vehicles, uniforms, cell phones</i> )	15,000	8,000
<b>TOTAL</b>	<b>\$227,000</b>	<b>\$145,900</b>

Source: OIG analysis of TSA data

Once it receives a canine, TSA trains the dog and handler at its Canine Training Center at Lackland Air Force Base in San Antonio, Texas. At the time of our review, TSA provided 20 weeks of initial PSC training, which included odor recognition training and development of search patterns, responses, and endurance in multiple aviation environments. The training center provided PSC handlers with 12 weeks of training. The classroom training included search techniques before TSA paired the handler with the canine. Once paired, the PSC team completes the training.

After graduation, the PSC team is sent to a designated airport and is given 30 days to acclimate to the new operational environment. A regional canine training instructor administers an initial Operational Transition Assessment to evaluate the PSC team’s performance at the assigned airport. The team is certified to conduct screening activities once it successfully completes the evaluation.<sup>5</sup> To measure a canine’s ability to detect an explosive odor and its handler’s ability to recognize and respond to the canine’s change of behavior within an operational environment, TSA periodically conducts a covert exercise called a Short Notice Assessment (SNA).

<sup>5</sup> A certified PSC team has met or exceeded the established explosives detection certification standards and has no restrictions when conducting screening activities.



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TSA uses two information systems to record daily utilization, training, and assessment data for PSC teams:

- Asset Management Database tracks certification and training status information for canine teams and results of assessments, such as SNAs, conducted by field personnel.
- Canine Website System tracks operational data such as utilization and training records, as well as Canine Training Center assessment data for canine teams. Daily utilization records may include searches by canines, public visibility activities, and passenger and cargo screening information.

TSA relies on multiple layers of security to detect and prevent catastrophic aviation events. However, work performed by DHS OIG and other oversight entities disclosed shortfalls within many of the security layers.<sup>6</sup> For example, our prior covert testing efforts identified vulnerabilities in TSA's checkpoint screening effectiveness and access controls to airport secure areas. TSA has yet to show significant progress in preventing security risks exposed through our covert testing. We conducted this audit to determine whether TSA deployed PSC teams as necessary to fulfill its layered approach for passenger aircraft security and detect a variety of explosive items to safeguard the traveling public.

## Results of Audit

TSA cannot show deployment and use of its PSC teams provide effective security at passenger screening checkpoints. Specifically, TSA has not determined the number of teams needed to provide security and mitigate risks because it does not identify and document mission needs, capability gaps, and operational goals to appropriately deploy the teams. TSA may not be allocating PSC teams to the highest risk airports because it does not properly justify and document allocation decisions. TSA has not determined whether the limited use of PSC teams provides sufficient security because it does not justify the

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<sup>6</sup> See e.g., *Covert Testing of TSA's Passenger Screening Technologies and Processes at Airport Security Checkpoints (Unclassified Summary)*, OIG-15-150, September 22, 2015; *Covert Testing of TSA's Screening Checkpoint Effectiveness (Unclassified Summary)*, OIG-17-112, September 27, 2017; *Covert Testing of Access Controls to Airport Secure Areas (Unclassified Summary)*, OIG-19-21, February 13, 2019; *AVIATION SECURITY: Airport Perimeter and Access Control Security Would Benefit From Risk Assessment and Strategy Updates*, GAO-16-632, May 31, 2016.



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teams as the best, most cost-effective checkpoint security. Finally, TSA cannot be assured airports are using PSC teams properly because it does not adequately oversee TSA management operations at airports. We also found canines on TSA's PSC teams may not detect [REDACTED]

[REDACTED] This is due to canines having inherent limitations, restricting TSA's ability to train PSCs to detect all significant explosive threats.

As a result, our Nation's aviation system and the traveling public could be at risk of a catastrophic event caused by an undetected explosive device. Further, TSA could have redirected nearly \$77 million spent on PSC teams in fiscal year 2018 to other security programs and activities to better protect the aviation system.

### **TSA Cannot Show It Is Deploying and Using Its PSC Teams to Provide Effective Security**

TSA cannot show deployment and use of its PSC teams provide effective security at passenger screening checkpoints. Specifically, TSA has not determined the number of teams needed to provide security and mitigate risks because it does not identify and document mission needs, capability gaps, and operational goals to appropriately deploy the teams. TSA may not be allocating PSC teams to the highest risk airports because it does not properly justify and document allocation decisions. TSA has not determined whether the limited use of PSC teams provides sufficient security because it does not justify the teams as the best, most cost-effective checkpoint security. Finally, TSA cannot be assured airports are using PSC teams properly because it does not adequately oversee airport management in this regard.

### **TSA Has Not Determined the Number of PSC Teams Needed to Provide Security and Mitigate Risks**

According to TSA's *Transportation Security Capability Analysis Process Implementation Guide*, documenting mission needs begins with recognizing key TSA functions to successfully carry out its mission. The functions include mitigating the introduction of explosive materials at airport screening checkpoints and optimizing the number, capability, and use of canine teams. According to the guide, once mission needs are known, TSA should identify potential capability gaps, which may change as technology evolves and new threats emerge.



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In addition, the *Government Performance and Results Act Modernization Act of 2010* requires agencies to establish objective, quantifiable, and measurable performance goals contributing to the general goals and objectives in an agency's strategic plan. For TSA's PSC teams, this would include goals such as the number of airports covered and travelers screened.

Contrary to these guidance documents, TSA could not provide a formal assessment documenting the need for canine teams as a layer of security or the gaps the teams would fill. According to officials, TSA has not been required to determine the number of PSC teams needed to provide security and mitigate risks and has reactively allocated PSC teams based on congressional funding.

This is occurring because TSA does not have a documented formal assessment of mission needs, capability gaps, and performance goals for its PSC teams. Although TSA has documents related to the teams, it could not provide a final document or policy identifying the methodology used to determine the metrics for its PSC teams. TSA provided a draft working paper from 2015, which included a rough estimate of the optimal number of PSC teams needed to secure airport screening checkpoints, but the draft did not include a methodology for how TSA determined these numbers. The document also did not indicate the numbers represented TSA's operational goals for its PSCs.

### **TSA May Not be Allocating PSC Teams to the Highest Risk Airports**

According to the U.S. Government Accountability Office, management should implement internal control activities through policies to achieve its objectives and respond to risks.<sup>7</sup> In addition, Federal agencies are responsible for implementing risk management practices that identify, assess, and respond to risks. These practices must be forward-looking and designed to help leaders make better decisions and alleviate threats.<sup>8</sup> Although TSA had a risk-based model for deploying PSC teams to airports, it deviated from the model in FY 2019 and allocated canine teams based on informal and undocumented executive discretion.

We compared TSA's FY 2019 risk model with the allocation of PSC teams based on executive discretion. TSA did not deploy PSC teams to 10 Category I

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<sup>7</sup> *Standards for Internal Control in the Federal Government*, GAO-14-704G, September 10, 2014

<sup>8</sup> Office of Management and Budget Circular No. A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* (Rev. July 15, 2016).



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airports, which TSA classifies as the second highest of five risk levels, as indicated by the risk model. Instead, TSA focused on efficiency and allocation of additional teams to the largest airports. Several canine officials said some local TSA managers use PSC teams to expedite passenger-screening throughput rather than to detect explosive odors as intended. TSA officials said they use the risk model to begin informal conversations with Federal Security Directors (FSD) and as a guide for allocating PSC teams, rather than a policy. TSA officials could not provide evidence of discussions about allocations or the methodology used to determine how allocations were revised.

This is occurring because TSA does not have a formal process to fully document and expeditiously approve allocation decisions about PSC teams. TSA also did not document officially allocation justifications deviating from its FY 2019 risk model. TSA did not formally document the justifications for its executive discretion or provide steps taken to mitigate the risks for airports that were not allocated PSC teams.

Although the TSA Administrator signed an allocation memo in FY 2016, TSA has not consistently formalized allocation memos before the start of the fiscal year to ensure accountability and allocation of PSC resources are based on risk. In FY 2017, allocation of new PSC teams was approved verbally without a memo. In FY 2019, TSA did not finalize the allocation memo until May, and the memo did not discuss analysis or justification for the allocation decisions.

### **Limited Use of PSC Teams**

In its *TSA's Measures of Accountability and Productivity (MAP) Guidelines*<sup>9</sup>, TSA established targets for how long PSC teams should operate on a daily basis. According to the MAP Guidelines, the national "on-leash" standard is between 20 and 40 percent of a workday or approximately 1.5 to 3 hours of an 8-hour workday. A canine's total "on-leash" time should consist of three primary tasks:

- screening passengers and baggage for explosive odors at checkpoints;
- training exercises; and
- performing other utilization tasks, such as screening unattended bags or providing visible deterrence.

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<sup>9</sup> TSA's MAP Guidelines establish PSC team training and operational activity targets.

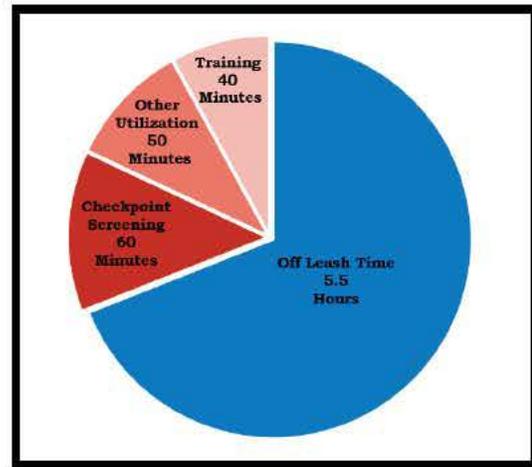


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Figure 2 shows an example of an ideal workday for a PSC team based on TSA’s MAP Guidelines. We found checkpoint screening by PSC teams is limited by several factors. Our analysis of FY 2018 MAP data showed PSC teams spent less than 1 hour per work day screening for explosive odors at checkpoints, which is within the standard. Subsequent to the completion of our audit work, TSA acknowledged the original MAP requirements no longer aligned with the PSC primary focus at checkpoints. Consequently, in May 2019, TSA revised these guidelines by increasing “on-leash” time to four hours per day. For airports using canine teams as a layer of security, TSA reported PSC teams screened about 9 percent (51.5 million of 605 million) of passengers. The remaining 91 percent of passengers were not screened by PSC teams. Finally, TSA is unable to use all of its authorized PSC teams to conduct screening at the checkpoints for reasons such as when canines are in training or a canine or handler is on medical leave.

**Figure 2: Example of an Ideal 8-Hour Workday for a PSC Team**



Source: DHS OIG analysis and TSA’s MAP Guidelines

In addition to the checkpoint screening limitations, as of April 2019, only 273 (63 percent) full-time teams of TSA’s 436 authorized PSC teams were operational. TSA deployed teams to 47 of 449 (10 percent) domestic airports. However, only 9 of 47 airports (19 percent) were operating at full capacity with all assigned PSC teams conducting screening. About 13 of the 47 (28 percent) airports had 50 percent or fewer of their canine teams actively screening.

Although it must follow on-leash standards, TSA has not verified the amount of time PSC teams spend screening passengers and baggage for explosives, as well as the number of operational teams, is effective as an additional layer of security at checkpoints.



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**No Assurance Airport Staff are Using PSC Teams Properly**

According to the *Proprietary Canine Manual*, TSA FSDs and staff at airports are responsible for ensuring appropriate and effective use of PSC teams, providing support, and ensuring administrative oversight for implementation of the teams. We found that, although TSA provided the *Proprietary Canine Manual* and additional directives, it did not provide enough oversight to ensure all FSDs followed the policies and procedures and used PSC teams effectively or as intended. For example, we interviewed several NEDCTP officials who stated local TSA management at some airports used canines to expedite passenger screening at checkpoints rather than to detect explosive odors as intended. To expedite checkpoint screening, airports rely on canines to screen passengers in the checkpoint queue before they are screened by metal detectors rather than Advanced Imaging Technology machines. This method of screening takes less time than the current and standard screening of passengers using Advanced Imaging Technology equipment. More importantly, this process introduces greater risk because the metal detector only identifies metallic objects whereas the other equipment identifies all anomalies on a person's body.

In FY 2018, TSA's Special Operations Division administered a survey to PSC handlers and concluded airports used canine teams for efficiency and reducing passenger wait times at checkpoints rather than for security. As previously mentioned, if the airport provided PSC teams at the checkpoint, TSA relied on walk through metal detectors - less reliable screening methods for passengers. Additionally, in response to an April 2019 internal NEDCTP survey question, an airport canine official stated FSDs "insist" PSC teams continue screening at checkpoints even when there are no passenger lines. According to the official, the idle PSC teams could be used better in training activities, conducting proactive sweeps, and providing public visibility. The official also stated the FSDs emphasized passenger-screening throughput over the proper use of the PSC teams. The individual indicated if the FSD is not required to report to upper management about how PSC teams are used, it could be a detriment to the program.

We attribute TSA's inability to ensure proper use of PSC teams at airports to its inadequate oversight of TSA management operations at the airports, including not enforcing canine program guidelines. This was confirmed by a senior TSA official who also said the component did not ensure TSA management at all airports use the teams to detect explosive odors as trained. TSA also does not hold FSDs accountable for proper use of PSC teams. In particular, we



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determined FSD performance plans do not include standards to hold FSDs accountable for how they use canine teams.

## Canines on PSC Teams May Not Detect [REDACTED]

Federal law requires TSA to periodically review threats to aviation, with particular focus on explosive materials presenting the most significant threats to passenger aircraft.<sup>10</sup> To achieve its mission, TSA must train canines to detect the most significant threats to aviation security. However, we confirmed through our analysis that TSA's PSC teams may not detect [REDACTED]. Specifically, TSA was training its canine teams to detect 13 explosives and 2 components of explosive devices, but not [REDACTED].

To determine canine teams' effectiveness for checkpoint screening activities, TSA conducts SNAs at the airports. SNAs measure canines' ability to identify and properly respond to explosive odors they are trained to detect in an operational environment. TSA's FY 2018 SNA results showed canines [REDACTED] initial SNAs. Although TSA trains its canines to detect explosives on moving people and objects, the component's own covert tests revealed canines did not always detect explosive training aids during actual screening at airports.

According to a canine program official, with regard to TSA's management of its PSCs, "We are laying tracks as the train is moving...We are constantly in catch-up."

TSA's Office of Inspection's Special Operations Division also assessed PSC teams' effectiveness through its covert testing and identified deficiencies. Between January and April 2017, the division conducted the first round of testing on canine teams at 24 airports and conducted the second round of testing in FY 2018. The results of this testing identified significant improvements were needed. TSA has been working to reduce the vulnerabilities identified in the testing. For example, it developed and is implementing the open queue configuration at checkpoints. This new configuration is designed to increase canine detection capabilities by ensuring

<sup>10</sup> 49 United States Code (U.S.C.) Section 44912 (b)(1)(B)



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more open spaces for canines to process and assess explosive odors. However, the results of TSA's efforts will not be known until the Special Operations Division conducts further testing.

We compared TSA's current Canine Explosives Training Aid (CETA) list with the current Detection Standard Analysis and Revision Methodology (DSARM) list of explosives. The CETA list contains all explosives TSA canines are trained and certified to detect. The DSARM list is classified and contains over 300 current explosives identified by subject matter experts in aviation security. Of the 13 explosive odors TSA was training the canines to detect, [REDACTED] the top [REDACTED] threats on the DSARM list.<sup>11</sup> [REDACTED] odors were among the top 100.

TSA acknowledged it had not updated its training aids for canines "in many years" to ensure they include emerging explosive threats. According to TSA officials, some of the training aids are based on outdated information, such as known and perceived threats and intelligence data, which is no longer relevant. This occurred because TSA did not have a formal process to evaluate and update its explosive training aids inventory to include emerging explosive threats based on intelligence. TSA acknowledged it did not have a formal process and in FY 2017, TSA's Explosives Operations Branch and NEDCTP began validating the then-current odor list to align with current explosive threats. TSA documented this initiative as a long-term project. However, almost 3 years later, TSA has not completed this initiative. According to TSA officials, its Requirements and Capabilities Analysis Office is working to create a formalized process to update its odor list based on current threats and new insights from scientific research. According to TSA, in March 2019, this office conducted a two-day interagency canine workshop, which included representatives from the United States Secret Service, Federal Bureau of Investigation, Massachusetts Institute of Technology, and Johns Hopkins University. The workshop focused on the current status of TSA's canine program, current and planned research and development efforts, and proposed changes to the CETA list.

Even if TSA creates a formal process to evaluate and update its CETA list, canines have two inherent limitations that could prevent detection of all high-risk explosive threats. First, TSA's recent internal testing showed canines are [REDACTED]. The second limitation is [REDACTED].

<sup>11</sup> We removed the two component odors from our analysis because they are components of an explosive device, not an actual explosive, and, therefore, are not included in the DSARM list.



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[REDACTED]

To train and maintain the canines' odor detection capabilities, each airport has a CETA kit comprised of real explosives that emit odor. Understandably, a PSC team's detection capability is limited to non-hazardous, non-toxic training aids. Some other explosives are highly dangerous and exposure would be harmful to the handlers or canines' health and safety. TSA has not formally documented which current explosives threats canines can or cannot detect.

### **Conclusion**

In FY 2018, TSA reported spending nearly \$77 million in costs associated with its PSC teams, including personnel compensation and benefits as well as travel and lodging. As of October 2018, TSA had 287 PSC teams deployed and operating at airports to conduct screening activities at security checkpoints. However, TSA cannot show deployment and use of these PSC teams are effectively ensuring air transportation security.

Specifically, without defined mission needs, capability gaps, and operational goals, TSA cannot be certain it is properly allocating PSC teams to screen for explosives at airport screening checkpoints. Unless TSA assesses risk and formally justifies its allocation decisions, it cannot ensure it is deploying PSC teams in the most efficient and effective manner. TSA's PSC teams have limited presence at security checkpoints, as well as limited detection capabilities that may affect the teams' ability to provide an additional layer of security. Moreover, without adequate oversight to enforce canine program guidelines, airports may not be using PSC teams as intended or effectively.

Additionally, TSA is not training canines to detect the most significant explosive threats, and has not updated its explosive training aids to ensure they include emerging threats. TSA is aware of known inherent limitations restricting its ability to train PSC teams to detect all significant explosives threats. However, TSA has not developed an approach to address the challenges and optimize the PSC teams' capabilities to detect explosive odors. In FY 2018, TSA could have redirected the nearly \$77 million it spent on PSC teams to other security programs and activities to better protect the aviation system.



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## Recommendations

**Recommendation 1:** We recommend the Transportation Security Administration Executive Assistant Administrator, Security Operations, develop a detailed Passenger Screening Canine plan and implement policies to:

- a. identify and document the canine program's current operational capability needs and number of Passenger Screening Canine teams necessary for effective checkpoint screening;
- b. formalize a documented methodology to justify Passenger Screening Canine team allocation decisions;
- c. create a formal process to analyze and document capabilities of Passenger Screening Canine teams and justify whether the teams or other options provide the best, cost-effective security at checkpoints; and
- d. hold Federal Security Directors accountable for using the teams as intended by the National Explosives Detection Canine Team Program to maintain effectiveness. Additionally, TSA should establish a process to ensure local compliance with this guidance.

**Recommendation 2:** We recommend the Transportation Security Administration Executive Assistant Administrator, Security Operations, after demonstrating the need and cost-effectiveness of Passenger Screening Canine teams:

- a. establish a formal process to conduct an annual assessment of the Canine Explosives Odor List with current explosives threats based on intelligence information. From this assessment, TSA must determine and document whether its Passenger Screening Canine teams are capable of detecting the explosive threats; and
- b. update the Canine Explosives Odor List, based on the assessment conducted, to include current explosive threat odors canines may be able to detect that are not hazardous to the safety of the Passenger Screening Canine teams.

## Management Comments

TSA's comments noted that the agency appreciated the OIG's audit work to identify areas to optimize the use of canines as a layer of security. TSA



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concurred with the report's two recommendations, but indicated the agency disagreed with the conclusions. Specifically, TSA responded that the OIG did not complete analyses with the level of methodological rigor necessary to support the report's conclusions. We disagree with TSA's assessment, as the report provides specific details of the team's extensive analyses based on TSA's available data and products. The following is a summary of TSA's response to each recommendation and the OIG's analysis of those responses. TSA submitted technical comments separately, which we incorporated in the report as appropriate.

## **OIG Analysis of Management Comments**

### **Recommendation 1**

**TSA's Response:** TSA concurred and described plans to develop a formal, risk-based PSC Capability Strategic Road Map to address all components of this recommendation. The Road Map will identify capability needs, validate and enhance a risk-based allocation methodology, formalize Federal Security Director accountability, and implement measures to provide Federal Security Directors with the knowledge and resources needed to manage PSC teams. The estimated completion date is September 30, 2020.

**OIG Analysis:** This recommendation is resolved and open. TSA provided a corrective action plan and completion date that should satisfy the intent of the recommendation.

### **Recommendation 2**

**TSA Response:** TSA concurred and explained that the agency has developed a Requirements Engineering Integrated Process Manual to guide implementation of TSA's engineering methodology. TSA has prioritized research and development to determine canine capabilities in eight key areas and gain insight into canine behavior in working environments. Future updates to the Canine Odor List will include both hazardous and non-hazardous materials. The estimated completion date is March 31, 2021.

**OIG Analysis:** This recommendation is resolved and open. TSA provided a corrective action plan and completion date that should satisfy the intent of the recommendation.



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## **Appendix A**

### **Objective, Scope, and Methodology**

The Department of Homeland Security Office of Inspector General (OIG) was established by the *Homeland Security Act of 2002* (Pub. L. No. 107-296) by amendment to the *Inspector General Act of 1978*.

We conducted this review to determine whether TSA deployed PSC teams as necessary to fulfill its layered approach for passenger aircraft security and detect a variety of explosive items to safeguard the traveling public. To achieve our objective, we assessed the number of canines deployed, canine testing, and accompanying procedures. Specifically, we reviewed TSA's NEDCTP management operations from FY 2017 through April 2019. We reviewed Federal, departmental, and component guidance on explosive canine detection team management, including the TSA *Proprietary Canine Manual*, Revision 9.2. We interviewed headquarters officials from DHS Office of the Chief Readiness Support Officer, DHS Science and Technology Directorate, and officials from various TSA offices. We reviewed prior OIG and Government Accountability Office reports for findings and recommendations related to our audit.

To understand TSA's PSC operations, we conducted site visits and interviewed officials at TSA Headquarters and three airports: Logan International Airport in Boston, MA; Dulles International Airport in Dulles, VA; and George Bush Intercontinental Airport in Houston, TX. We interviewed an FSD, Assistant FSDs, Field Canine Coordinators, and Canine Supervisors. We also met with officials at TSA's Canine Training Center at Lackland Air Force Base in San Antonio, TX to understand current training requirements as well as future plans and procedures for PSC teams.

TSA provided multiple data spreadsheets for FY 2018, which included the total amount spent on PSC teams; initial start-up and maintenance costs for a PSC team; total number of passengers screened by PSC teams; total number of PSC teams certified and working at passenger screening checkpoints as of April 19, 2019; all SNAs conducted in FY 2018; as well as TSA's PSC team allocations for FY 2018 and FY 2019, using its risk model and final FY 2019 allocation. We reviewed the spreadsheets for background information related to the cost of the program. This information is manually entered so we could not conduct data reliability tests. Therefore, we used this data to support our program cost figures for background purposes only.



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To determine the average time PSC teams spent screening passengers for explosives at checkpoints in FY 2018, we relied on data from TSA's Canine Website System, which included PSC teams and total time the canines were "on-leash". This data contained all PSC teams' duty days and total time the teams spent conducting screening activities at checkpoints in FY 2018. For this analysis, we removed any PSC teams that did not spend any duty days conducting screening activities at the checkpoints because we presumed the teams were never fully certified to conduct screening activities. We compared the data in the spreadsheet with reports within the Canine Website System to ensure the information provided matched. We determined the data was sufficiently reliable to support our findings.

To determine whether TSA's internal testing found its PSC teams to be a successful layer of security, we reviewed its testing results for Operations Cairo and Bretagne. Additionally, we interviewed TSA officials involved in those operations and analyzed documents regarding the scope of testing and methodologies used. We did not validate this data and, therefore, did not use it as the sole basis to support our findings.

To determine whether TSA's CETA list was updated to train canine teams on the highest-risk threats, we compared TSA's CETA list from TSA's NEDCTP as of October 2018, with the DSARM list provided by TSA's Office of Inspection. The DSARM list is also used by TSA's Office of Inspection's Special Operations Division to assess aviation security vulnerabilities through covert testing. The DSARM data is ranked from highest to lowest threat based on incident history, availability, and amount of damage the explosive can cause. We identified the top 20 highest-risk explosive threats.

We conducted this performance audit between July 2018 and September 2019 pursuant to the *Inspector General Act of 1978*, as amended, and according to generally accepted government auditing standards. Those standards require we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based upon our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based upon our audit objectives.



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**Appendix B**  
**TSA's Comments to the Draft Report**

U.S. Department of Homeland Security  
601 South 12<sup>th</sup> Street  
Arlington, VA 20598-6028



Transportation  
Security  
Administration

March 26, 2020

MEMORANDUM FOR: Joseph V. Cuffari, Ph.D.  
Inspector General  
U.S. Department of Homeland Security

FROM: David P. Pekoske *David P. Pekoske*  
Administrator  
Transportation Security Administration

SUBJECT: Management's Response to OIG Draft Report: "TSA's  
Challenges with Passenger Screening Canine Teams,"  
(Project No. OIG 18-094-AUD-TSA)

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security's (DHS) Transportation Security Administration (TSA) appreciates the work of the Office of Inspector General (OIG) in planning and conducting its review and issuing this report.

While TSA concurs with the recommendations in the report, TSA strongly disagrees with the report's conclusions that because TSA has not met the identified program management best practices for the Passenger Screening Canines (PSC) program (1) the program is not effectively helping ensure air transportation security and consequently "our Nation's aviation system and the travelling public could be at risk of a catastrophic event caused by an undetected explosive device," and (2) that "TSA could have redirected the nearly \$77 million it spent on PSC teams to other security programs and activities to better protect the aviation system." The Office of the Inspector General audit team has not completed any analysis with the level of methodological rigor necessary to support these conclusions.

TSA PSCs provide a valuable detection and deterrence capability in TSA's layered approach for transportation security that cannot be duplicated by technology. They have been trained to detect explosive odor emitted from persons or their accessible property. This capability allows PSC teams to screen a large number of people and large spaces for explosive threats in a short period of time. PSC teams may also be deployed outside the checkpoint to assist with other operational or risk-based screening initiatives. In 2019, TSA PSC teams screened more than 30 million passengers at security checkpoints.



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The program has experienced significant growth since 2011, with 422 funded TSA PSC teams. The program has also shown its willingness and dedication to continued improvement in how canines are used to ensure effectiveness. TSA appreciates the OIG's work to identify areas to optimize use of canines as a layer of security. Although this report is informative, TSA believes it minimizes the accomplishments of TSA's Canine Program, specifically relating to operational proficiency improvements by PSC teams.

TSA implemented several risk-based initiatives that directly support canine modernization goals. TSA notes that we are the only U.S. government entity that conducts extensive covert testing on its canine teams' effectiveness. As the report correctly states, TSA identified performance improvements as a direct result of this testing. These initiatives aim to improve effectiveness and accountability, as well as maximize canine use and productivity in support of the Administration's broader efforts to strengthen canine capabilities. TSA also established an executive oversight working group to ensure continued momentum and executive-level tracking of progress. Given this track record, TSA believes continued investment in this program is clearly warranted.

The draft report contained two recommendations with which TSA concurs. Attached, find our detailed response to each recommendation. TSA previously submitted technical comments under separate cover for OIG's consideration.

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

Attachment



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**Attachment: Management Response to Recommendations**  
**Contained in OIG Draft Report, "TSA's Challenges with Passenger Screening**  
**Canine Teams," (Project No. OIG 18-094-AUD-TSA)**

**Recommendation 1:** We recommend the Transportation Security Administration Executive Assistant Administrator, Security Operations, develop a detailed Passenger Screening Canine plan and implement policies to:

- a. identify and document the canine program's current operational capability needs and number of Passenger Screening Canine teams necessary for effective checkpoint screening;
- b. formalize a documented methodology to justify Passenger Screening Canine team allocation decisions;
- c. create a formal process to analyze and document capabilities of Passenger Screening Canine teams and justify whether the teams or other options provide the best, cost-effective security at checkpoints; and
- d. hold Federal Security Directors accountable for using the teams as intended by the National Explosives Detection Canine Team Program to maintain effectiveness. Additionally, TSA should establish a process to ensure local compliance with this guidance.

**Response:** Concur. TSA will develop a formal, risk-based Passenger Screening Canine (PSC) Capability Strategic Road Map. This document will address all components of this recommendation, to include identifying capability needs, validating and enhancing a risk-based allocation methodology, and formalizing Federal Security Director accountability.

TSA implemented several risk-based initiatives that directly support canine modernization goals. These initiatives aim to improve effectiveness and accountability, as well as maximize canine use and productivity.

With Congressional and Administration support, TSA invested significantly to increase the number of PSC teams since 2011, with 422 funded teams in fiscal year 2020. TSA deployed these additional teams to various airport locations based on several factors, such as risk, airport configuration, and passenger throughput. TSA will continue to document, within the PSC Capability Strategic Road Map, the link between canine operational capability needs and enterprise-level capability needs and gaps. This effort will help to ensure optimal coverage by PSC teams, including additional law enforcement officer PSCs.

TSA's risk-based PSC allocation methodology is designed to appropriately account for new or mitigating factors affecting allocation decisions. A validation and enhancement of the model and corresponding methodology are under development and will be documented in the PSC Capability Strategic Road Map. A formal comparison of the



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capabilities of PSC teams in the checkpoint environment to other mitigation options will also be addressed in the PSC Capability Strategic Road Map.

TSA is implementing measures to provide Federal Security Directors with the knowledge and resources so that they can be held accountable for using PSC team in accordance with the direction and requirements of the National Explosives Detection Canine Team Program. To that end, effective October 1, 2019, the following changes were made:

- Field Canine Coordinators (FCCs) and Regional Canine Training Instructors (RCTIs) now report to the Federal Security Directors.
- FCC and RCTI positions will be converted into a single Canine Training Instructor position in calendar year 2020.
- Supervisory personnel for FCC/RCTIs have formally transitioned to a Canine Quality Assessor.
- CQAs will conduct quality assurance processes to improve accountability at all 47 PSC airports through Canine Program Compliance Assessments.
- FSDs have all completed a specialized training event at the TSA Canine Training Center, so that they understand the program requirements and their responsibilities.

Estimated Completion Date (ECD): September 30, 2020.

**Recommendation 2:** We recommend the Transportation Security Administration Executive Assistant Administrator, Security Operations, after demonstrating the need and cost-effectiveness of Passenger Screening Canine teams:

- a. establish a formal process to conduct an annual assessment of the Canine Explosives Training Aids with current explosives threats based on intelligence information. From this assessment, TSA must determine and document whether its Passenger Screening Canine teams can detect the explosive threats; and
- b. update the Canine Explosives Training Aids, based on the assessment conducted, to include current explosive threat odors canines may be able to detect that are not hazardous to the safety of the Passenger Screening Canine teams.

**Response:** Concur. TSA has developed a Requirements Engineering Integrated Process Manual (REIPM) to guide implementation of TSA's requirements engineering methodology. The REIPM supports efficient and consistent requirements engineering, builds upon legacy best practices, creates a process/product improvement forum, defines roles and responsibilities, and focuses on instilling engineering rigor while allowing for adaptive implementation.

While the REIPM has historically focused on transportation security equipment processes and procedures, it will be updated to include a documented, formalized process for future



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updates to the TSA Canine Odor List. The proposed process will be based on several factors including Detection Standard Analysis Revision Methodology, current intelligence, and findings from focused research and development (R&D).

To determine canine capabilities to detect explosive threats in an operational environment, TSA has prioritized R&D into eight key areas to obtain scientific data to inform decisions. Initial studies will aim to optimize the working environment to inform concept of operations and standard operating procedures. Follow-on studies will focus on passenger screening canine capabilities.

Additionally, TSA has planned R&D to gain insight into canine behavior in working environments. Coordination with the U.S. Department of Homeland Security Science and Technology Directorate (DHS S&T) to conduct these R&D studies is underway.

TSA's Chemistry and Explosives Branch maintains the Canine Odor List and the Canine Explosives Training Aids (CETAs). Training and Development (T&D) is responsible for imprinting the canines according to the odor list and training aids. T&D's Canine Training Center coordinates with Domestic Aviation Operations and the Chemistry and Explosive Branch to periodically review the odor list to ensure it incorporates current threats to the transportation domain. Future updates to the Canine Odor List will include both hazardous and non-hazardous materials. Hazardous materials will require the assessment and use of non-detonable training aids. Several variations are under development for materials that are hazardous to the PSC teams.

TSA is coordinating further R&D with DHS S&T to determine whether TSA can obtain non-detonable aids that could serve as a suitable substitute for hazardous, live explosives. Results from R&D activities will drive future development of non-detonable training aids for applicable explosives in the CETA kit.

ECD: March 31, 2021.



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**Appendix C**

**List of Airports with Passenger Screening Canine Teams**

	<b>Airport Category</b>	<b>Airport Code</b>	<b>Airport Name</b>	<b>FY 2019 Authorized PSC teams</b>
1				25
2				25
3				25
4				25
5				25
6				20
7				15
8				15
9				14
10				14
11				13
12				13
13				12
14				11
15				10
16				9
17				9
18				8
19				7
20				6
21				6
22				6
23				6



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Airport Category	Airport Code	Airport Name	FY 2019 Authorized PSC teams
24			6
25			6
26			5
27			5
28			5
29			5
30			5
31			5
32			5
33			4
34			4
35			4
36			4
37			4
38			4
39			4
40			4
41			4
42			4
43			4
44			3
45			3
46			3
47			3
<b>TOTAL AUTHORIZED PSC TEAMS</b>			<b>422</b>



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**Appendix D**  
**Office of Audits Major Contributors to This Report**

Patrick O'Malley, Director  
Sharon Johnson, Audit Manager  
Amber Carlson-Jones, Program Analyst  
Thomas Bobrowski, Program Analyst  
Jeffrey Threet, Program Analyst  
Saajan Paul, Auditor  
Kelly Herberger, Communications Analyst  
Deborah Mouton-Miller, Communications Analyst  
David Kinard, Independent Referencer



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