May 18, 2017

From the Border to Disasters and Beyond: Critical Canine Contributions to the DHS Mission

Subcommittee on Oversight and Management Efficiency, Committee on Homeland Security, United States House of Representatives, One Hundred Fifteenth Congress, First Session

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Statement of Subcommittee Chairman Scott Perry (R-PA)
Oversight and Management Efficiency Subcommittee

"From the Border to Disasters and Beyond: Critical Canine Contributions to the DHS Mission"

May 18, 2017

Remarks as Prepared

As we welcome law enforcement officers from across our nation to Washington D.C. to commemorate National Police Week, we'd be remiss not to thank the unsung hero partners of many of our forces: canines.

Earlier this month, near an immigration checkpoint in Tucson, Arizona, a U.S. citizen was arrested for narcotics smuggling after a Border Patrol canine unit detected an odor emitting from a hearse, which produced over $33,000 worth of marijuana concealed within a casket.

After the Twin Towers fell on 9/11, hundreds of talented canine teams were integral to search and rescue attempts, searching through 16 acres of rubble where the World Trade Center once stood, to find tragic remains, or those lucky enough still to be alive.

TSA's canine teams screened approximately 26 million passengers in fiscal year 2016, and responded to 35,000 unattended items within the transportation system in 2016, to ensure no explosives were present and mitigate the impact of shutdowns and evacuations.

And finally, in October 2016, Customs and Border Protection (CBP) employees at JFK Airport said a happy farewell to retiring Jasper, a CBP agriculture canine credited with over 17,000 seizures and over 23,000 interceptions. Jasper thwarted smuggler's attempts to sneak everything and anything past customs – from illegal whale meat to live turtles.

These are just a few examples of the many ways canines contribute to the safety and security of our homeland.

DHS maintains robust canine programs with teams ranging from patrol units with the US Secret Service, explosive detection units with the Coast Guard and TSA, and Urban Search and Rescue units with FEMA. CBP alone has approximately 1,500 canine teams – the largest overall canine program at DHS, with distinct mission sets including, but not limited to: tactical operations along the border, detection of narcotics, firearms, undeclared currency, and concealed persons attempting illegal entry into the U.S., and detection of undeclared agricultural products with the potential to wreak havoc on U.S. agricultural resources.

In total, six operational components use canines – CBP and Border Patrol, the TSA, the Coast Guard, the Secret Service, the Federal Protective Service of the National Protection and Programs Directorate, and

FEMA. Additionally, the Science and Technology (S&T) Directorate provides ongoing research and support to canine explosives detection skills training. For example, just recently, S&T announced a grant of $198,000 for a wearable device on CBP canines that provide real-time monitoring of the dogs' vital signs while operating in the field.

With the highest threat environment since 9/11, our law enforcement personnel must have the tools they need to keep Americans safe. A dog's sense of smell is vastly more sensitive and acute than a human's, and their detection abilities are unrivaled. As terrorists seek to exploit any vulnerability in our security, the Department's use of canines is that much more important. For example, as we've seen in recent attacks at the Brussels Zaventem Airport and Istanbul Ataturk Airport, aviation systems remain a large target. And as terrorists' capabilities become more sophisticated with abilities to circumvent our technology systems, a canine's nose may be our last line of defense.

Canine contributions to the security of our nation are vast – along our borders, at our ports of entry, in our airports, and beyond. I look forward to hearing from our witnesses today on the important contributions of the Department's impressive and broad use of canines.

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TESTIMONY OF

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BEFORE THE

U.S. House of Representatives

Committee on Homeland Security
Subcommittee on Oversight and Management Efficiency

ON

"From the Border to Disasters and Beyond: Critical Canine Contributions to the DHS Mission"

May 18, 2017
Washington, DC

Introduction

Chairman Perry, Ranking Member Correa, and members of the subcommittee, thank you for the opportunity to testify regarding the canine programs at the Transportation Security Administration (TSA), U.S. Customs and Border Protection (CBP) and the Science and Technology Directorate (S&T). Canine teams at TSA, CBP and S&T provide the U.S. Department of Homeland Security (DHS) with reliable and mobile detection capabilities and a visible deterrent against criminal and terrorist threats. Detection canines are the best and most versatile mobile detection tool that we have protecting the homeland today. Canines have been used by law enforcement and first responder agencies for decades to protect the homeland.

At our Nation's air, land, and sea ports of entry (POEs) and at preclearance locations abroad, CBP officers utilize specially trained canines for the interdiction of narcotics, firearms, and undeclared currency, as well as in support of specialized programs aimed at combating terrorism and countering human trafficking. In between the POEs, the U.S. Border Patrol (USBP) uses canines to detect illegal aliens, intercept narcotics, and stop smugglers at checkpoints and along our borders. The CBP Canine Training Program maintains the largest and most diverse law enforcement canine training program in the country. It is primarily responsible for the initial training of 1,342 of the over 1,448 deployed CBP canine teams throughout the United States.[1]

TSA procures, trains, and deploys explosives detection canine teams to secure our Nation's transportation systems through visible deterrence and timely, mobile operations that support airports, mass transit, and other transportation facilities across the country.

The mission of the Detection Canine Program within the Explosives Division of S&T's Homeland Security Advance Research Projects Agency is to provide the Homeland Security Enterprise with the tools, techniques, and knowledge to better understand, train, and utilize the domestic detection canine. S&T works with DHS partners, including the TSA, CBP, Federal Emergency Management Agency (FEMA), other federal agencies, state and local law enforcement and international partners, to provide a focal point for the Homeland Security Enterprise on canine research, development, testing, and evaluation. S&T's primary objectives are to promote intra-Department and interagency coordination, to drive the development of broadly-applicable technologies, and to increase the operational proficiency of domestic detection canine teams. The events of the Boston Marathon bombing and recent attacks in Brussels, Paris, and Russia have spurred a specific focus within S&T's program on Person-Borne Improvised Explosive Device (PBIED) detection canines.

CBP Canine Training Program History

During the latter part of 1969, the former U.S. Customs Service carried out a study to determine the feasibility of using detection canines in the fight against drug smuggling. As a result of that

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[1] Of the current 1,448 canines deployed today in CBP, the CBP Canine Training Program trained 1,342; the remaining 106 are agriculture canines trained by the U.S. Department of Agriculture in Newnan, Georgia.

study, canine trainers from various branches of the U.S. military were recruited, and on April 1, 1970, the U.S. Customs narcotic detector dog training program was established in San Antonio, Texas. Initially, efforts were concentrated on training dogs to detect the odors of marijuana and hashish, but the ever increasing smuggling of narcotics would make the detection of heroin and cocaine equally critical to stop the threat these drugs pose to our citizens.

In July 1974, the U.S. Customs Service detector dog training operation was relocated from San Antonio to its current location 70 miles west of Washington, D.C., in the town of Front Royal, Virginia. In 1991, Congress approved additional funding for the facility in Front Royal, which led to the construction of a new 100-run kennel, academic building, small arms firing range, and vehicle training areas. These new additions brought the detection training program facility up to date as it continued to produce canines trained in disciplines such as searching pedestrians and detecting the odors of narcotics, currency, and firearms.

In 1986, in response to an alarming increase in illegal alien apprehensions and narcotics seizures, the USBP created a pilot training program of canine teams trained to detect concealed humans, and the odors of heroin, cocaine, methamphetamine, and marijuana along our Nation's border. During the first five months of service, those initial canine teams accounted for numerous apprehensions of concealed people and over $150,000,000 in seized narcotics. The operational impact of a trained detection canine team was clear.

In order to establish consistency in training and certification standards, in 1993, the USBP established its own canine training facility in El Paso, Texas. The USBP National Canine Facility adopted ideologies and disciplines from European working dog standards and received numerous accolades and recognition from local, state, federal, and various international law enforcement agencies.

In the aftermath of the terrorist acts of September 11, 2001, as a component of the newly formed CBP, USBP and Office of Field Operations' (OFO) canine training programs were consolidated under CBP's Office of Training and Development (OTD) and renamed Canine Center El Paso (CCEP) and Canine Center Front Royal (CCFR). On October 1, 2009, the CCEP and CCFR were merged to create the CBP Canine Training Program. An integrated core curriculum was adopted combining the best practices of the legacy OFO and USBP training programs, each rich with history, tradition, and success. Training has been customized to ensure that the unique requirements of OFO and USBP are met.

The primary mission of the CBP Canine Training Program is to provide the initial basic training and certification to CBP officer/agent canine handler teams and instructors in the detection and apprehension of illegal aliens, and the detection and seizure of controlled substances and other contraband utilized to finance terrorism or transnational criminal organizations. Under the direction of OTD, the CBP Canine Training Program also offers formal training to various federal, state, and local, and tribal law enforcement agencies.

Additionally, the CBP Canine Training Program supports canine training initiatives under the direction of the Office of International Affairs, in coordination with the Departments of Defense and State and the United States Agency for International Development (USAID), by providing

foreign partners capacity building and technical assistance. As a resource center, the CBP Canine Training Program provides guidance on canine training issues, legal requirements, and certification standards to the operational components - OFO and USBP. While OTD develops and establishes the initial training requirements of CBP's canines, based on the components' needs and input, the utilization, maintenance, and deployment of canine teams is managed by CBP's operational components.

CBP Canine Training Disciplines

CBP's training cadre is comprised of experienced law enforcement officers and agents, also known as Course Developer Instructors, who come from existing field canine units and serve a three to five year instructor assignment. The CBP Canine Training Program possesses a unified training cadre consisting of OFO and USBP personnel who deliver training to integrated classes made up of CBP officers and USBP agents. This commonality brings with it the opportunity to seamlessly interchange staff to further integrate the CBP Canine Training Program. New canine teams and instructors continue to be trained in disciplines such as concealed human detection, pedestrian processing, detecting the odors of narcotics, currency and firearms, tracking and trailing, patrol, search and rescue, and human remains detection.

Concealed Human and Narcotic Detection
The Concealed Human Narcotic Detection Handler course includes in-depth training and certification in all aspects of canine behavior, along with handling, training and employing a passive indication detection canine, as well as canine policy, case law, and canine first-aid. Both the officer/agent and the canine are taught proper search sequences when searching private and commercial conveyances, freight, luggage, mail, open areas of land and structures. Concealed Human and Narcotic Detection Canines are taught to detect concealed humans and the odors of marijuana, cocaine, heroin, methamphetamine, hashish, and ecstasy. This discipline makes up the largest portion of canines deployed within CBP totaling approximately 1,227 teams.

OFO deploys specialized detection canine teams throughout the Nation, trained to detect drugs and concealed humans. The majority of the canine teams are concentrated in four field offices along the Southwest border. In addition to the canine teams OFO deploys to the POEs, the USBP Canine Program deploys over 800 specialized detection canine teams — trained to detect concealed humans and narcotics — throughout the Nation. The majority of the canine teams are concentrated in the nine Sectors along the Southwest border. During FY 2016, USBP canine teams were responsible for 41,807 human apprehensions and the seizure of 419,175 pounds of narcotics and $5,918,862 in currency.

The use of canines in the detection of narcotics is a team effort. CBP's Laboratories and Scientific Services Directorate (LSSD) produces canine training aids and provides analytical support to the CBP Canine Training Program, including controlled substance purity determinations, pseudo training aid quality analyses, and research on delivery mechanisms that maximize safe vapor delivery during training exercises. From FY 2016 to midyear FY 2017, LSSD produced and delivered over 3,200 training aids to the Canine Program for training and certifications, representing a 72 percent production increase.

In addition to traditional scientific support, LSSD has been conducting special research aimed to determine the detection and identification of signature odor profiles for fentanyl compounds. OTD, OFO, USBP, CBP's LSSD, Office of Chief Counsel, and Labor Employee Relations are working together to conduct a pilot course to assess the feasibility of safely and effectively adding fentanyl as a trained odor to OFO's deployed narcotic detection canine teams. The project will continue through the remainder of FY 2017, with evaluations conducted at scheduled benchmarks.

Search and Rescue
The Search and Rescue Handler course includes in-depth training and certification in all aspects of canine behavior, along with handling, training, and employing a dual-trained search and rescue trailing canine, as well as canine policy, case law and canine first-aid. Both the agent and canine are taught obedience, tracking/trailing, and large area search. The canine teams receive training in rappelling for helicopter operations, backtracking, and deployments in various environments (snow, desert, forest, and mountains). During FY 2016, USBP search and rescue canines rescued 15 individuals.

During one notable rescue, occurring on May 14, 2016, El Centro Sector received a request from the Imperial County (California) Sheriff's Office to respond to a 911 call. An El Centro Sector canine handler responded, and deployed his canine in an attempt to locate these subjects in the El Centro Station area of operations. While hiking into the area, the canine alerted to and located the four subjects in distress. All four subjects were provided medical treatment by the El Centro Sector Operators, and then turned over to Agents of the ELS Station for further processing.

A regimen added to the Search and Rescue capability, some canine teams are also trained in human remains and cadaver detection. This ability enables the team to assist in a myriad of situations ranging from locating the remains of persons who have expired in remote areas to assisting local law enforcement with suspicious death investigations and responding in recovery operations during natural disasters and terrorist attacks.

In FY 2016, USBP human remains detection (HRD) canines assisted with a total of 11 human remains recoveries. On January 13, 2017, San Diego Sector USBP received a request from the Chula Vista Police department for HRD canine assistance near Otay River National Park. The search request was in regards to a Chula Vista Police Department missing person/homicide investigation that has been ongoing for approximately 12 years. USBP HRD canine handlers responded, and successfully recovered human remains.

Tracking/Trailing
The Tracking/Trailing Handler course is an added capability to teams previously trained in detection or patrol. This course includes in-depth training involving conditioning a canine to follow the route of a person or persons traversing various types of terrain. Groups of aliens and smuggling organizations routinely travel cross-country. In areas where the ground surface is rough, such as mountainous environments, canine teams are able to track and trail where tracking is otherwise difficult or impossible.

Track/trail canine teams are also used in the search for specific individuals. For example, USBP track/trail canine teams assisted in the manhunt for suspected cop killer Matthew Eric Frein in September 2014 in Pennsylvania, in what became a seven week deployment cycle. The USBP Special Operations Group (SOG) and Special Operations Detachments responded to the support request from the Pennsylvania State Police. Over the course of seven weeks, over 100 Border Patrol Tactical Unit, Border Patrol Search, Trauma and Rescue and SOG-Intelligence Unit (SOG-IU) personnel, mission essential gear and equipment were deployed to Pennsylvania in search of the fugitive who ambushed two troopers, killing one. Frein was successfully apprehended on October 30, 2014.

Patrol
The Patrol Canine Handler course includes in-depth training and certification in all aspects of canine behavior, along with handling, training and employing a patrol canine to search, detain and when necessary physically subdue violent combative subjects. This course also includes training in canine policy, case law, and canine first-aid.

In FY 2016, USBP Patrol canines assisted in a total of 167 apprehensions, including in the execution of 14 arrest warrants and 18 physical apprehensions. A notable canine deployment occurred on February 2 and 3, 2015 in the USBP Buffalo Sector in Erie, Pennsylvania. Named Operation Northern Stop, this operation involved the Drug Enforcement Administration; Homeland Security Investigations; Bureau of Alcohol, Tobacco, Firearms and Explosives; Internal Revenue Service Criminal Investigation; United States Attorney's Office; United States Postal Inspection Service; United States Marshal's Service; Pennsylvania State Police, and Pennsylvania Office of the Attorney General. The target of this operation was a large drug trafficking organization linked to the Knights Templar Cartel, based in Mexico. This organization was active coast-to-coast in multiple states, and was responsible for the importation and distribution of large quantities of marijuana, cocaine, heroin, and methamphetamine into and throughout the United States. Lauded a major success, and a significant blow to drug trafficking and distribution throughout the area, the operation resulted the arrest and prosecution of 30 subjects; the searching of 17 locations in northwestern Pennsylvania; the seizure of $1,285,006 in United States currency; the seizure of $432,252 in jewelry; and the seizure of 23 vehicles.

Canine Currency/Firearms Detection
The Currency/Firearms Detection Handler course includes in-depth training and certification in all aspects of canine behavior, along with handling, training and employing a passive indication detection canine, as well as canine policy, case law and canine first-aid. Both the officer and the canine are taught proper search sequences when searching pedestrians, private and commercial conveyances, freight, luggage, mail, open areas of land and structures. Only a few days ago, on May 2, 2017, a canine team in the El Centro Sector aided in the detection and seizure of $18,000 in currency, as well as narcotics valued at more than $1.3 million, including 20.6 pounds of heroin, and 20.1 lbs. of methamphetamine in a single event.[2]

Canine Instructor
The CBP Canine Training Program trains experienced agents/officers to function as canine instructors in each of the varied disciplines for their respective components. This consists of

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[2] Cash - $18,000; Heroin (20.6 lbs) - $659,200; Meth (20.1 lbs) - $643,200; Total Narcotics value $1,320,400

extensive academic and practical training on canine methodology and the theory of problem solving. The instructor develops the canines and handlers to function as a team from the initial point of training through to certification and graduation. Upon completion of training, instructors return to their respective stations/ports to provide policy mandated maintenance training, as well as exercises designed to enhance skill and performance levels for all certified teams. In addition, the instructor cadre provides insight and guidance to administrative staff and serves as subject matter experts on canine training, canine handling, canine deployment, and canine program related courtroom testimony.

Operational canine instructors are tasked with the team's development throughout their tour within the canine unit. USBP currently has 304 canine instructors who train, enhance, and certify its 856 operational canine teams, providing a 1:3 ratio of instructors to handlers. USBP has determined that this instructor/handler ratio helps canine instructors better address complex subjects such as the operant[3] conditioning principles and various problem solving issues that the most advanced level canine training entails.

CBP Agriculture Canines

In 2003, when USDA transferred Plant Protection and Quarantine Officers to CBP, approximately 74 canine teams were included. Today, about 106 CBP agriculture canine teams provide screening at the border crossings, preclearance locations, air passenger terminals, cruise terminals, cargo warehouses, and mail facilities that process international passengers and commodities. All CBP agriculture specialist canine handlers and their canine partners complete the initial 10-13 week CBP Agriculture Specialist Canine Training at the USDA National Detector Dog Training Center (NDDTC). All the detector dogs at the NDDTC are adopted from rescue shelters in the United States or come to the program from private donations.

During a single week this month Murray, an agricultural canine and new addition to CBP, alerted to and helped intercepted more than 46 pounds of exotic fruit, peppers and beef found in checked bags at the Hartsfield-Jackson Atlanta International Airport. The seized food products- including potatoes, chili peppers, tomatoes, banana passion fruits, yellow Dragon fruits and beef- were destroyed and the travelers were not penalized as they declared the agriculture products to CBP. Prohibited food items, invasive weed seeds and insects, and plant and animal diseases pose a significant threat to U.S. agricultural industries and our nation's economy. On a typical day in FY 2016, CBP agriculture specialists discovered 404 pests at U.S. POEs and 4,638 materials for quarantine, helping keep our Nation and our economy safe.

CBP Canine Program Partnerships

CBP's Office of International Affairs (INA) Technical Assistance Division (INA/ITAD) conducts International Border Interdiction training, funded by Department of State, for various countries worldwide. These courses provide instruction on multiple aspects of border security, including targeting and risk management, interdiction, smuggling, search methodologies, analysis, canine enforcement, and narcotics detection identification. INA/ITAD has conducted

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[3] Operant conditioning is a type of learning where behavior is controlled by consequences, such as rewarding good behavior (positive reinforcement).

anti-smuggling training in heroin and opiate source countries such as Panama, Guatemala, Colombia, Ecuador, Peru, Mexico, Indonesia, India, Thailand, Afghanistan, Kenya, Cambodia, and the Philippines.

In 2015, at the request of the Government of Tanzania, the previous CBP Commissioner, and U.S. Ambassador to Tanzania, the CBP Canine Training Program conducted an initial assessment of the Government of Tanzania's capabilities with detection canines and canine training. The need and suitability of a start-up ivory and narcotic canine detection program to counter illegal wildlife and narcotics trafficking was identified. Immediately following the assessment, the CBP Canine Training Program developed a customized curriculum, with ivory as a newly trained odor, and were able to train four Tanzanian police officers who are posted at the Dar es Salaam Seaport and Airport. This entire effort was accomplished in approximately five months and led to one ivory trafficking arrest and narcotics seizure.

OTD is also active in sharing expertise in the United States. In 2016, the CBP Canine Training Program provided canine handler and instructor training for the Warren County Sheriff's Department; El Paso County Sheriff's Office; the National Park Service; Shelby County Sheriff's Office; Ysleta Del Sur Pueblo Tribal Police Department; Washington State Police; New Mexico State Police; and the Pennsylvania Department of Corrections.

TSA's National Explosives Detection Canine Team Program

TSA procures, trains, and deploys explosives detection canine teams to secure our Nation's transportation systems through visible deterrence and timely, mobile operations that support airports, mass transit, and other transportation facilities across the country. TSA's National Explosives Detection Canine Team Program (NEDCTP) began as the Federal Aviation Administration's Explosives Detection Canine Program in 1972 and transferred to TSA in 2002. Congress has recognized the value of TSA's NEDCTP through its continued support and funding, including through increased funding in FY 2017 appropriations. TSA's NEDCTP is currently the largest explosives detection canine program in DHS, and the second largest in the federal government, with 1,047 funded National Explosives Detection Canine teams currently stationed at more than 100 of the Nation's transportation venues. The success of TSA's NEDCTP is a prime example of federal, state, and local governmental entities working together with a common goal—to protect the American people and secure transportation.

Given the security effectiveness of high quality explosive detection canines, TSA partners with the Department of Defense (DOD) as well as private industry to ensure a reliable and adequate supply of canines. TSA partners with DOD's Military Working Dog Program to procure up to 280 canines per year. In addition to our work with DOD, TSA has contracts with several domestic vendors for suitable trained and untrained passenger screening canines. To support ongoing expansion of TSA's canine program, TSA has made significant investments in infrastructure at the Canine Training Center (CTC). These investments have enabled TSA to increase throughput by 20 percent from FY 2016 to FY 2017, including new teams for growth and attrition replacement.

Once TSA procures a canine, TSA pairs it with a federal, state, or local handler to be trained to operate in the aviation, maritime, mass transit, or cargo environments. The majority of canine teams working in the aviation environment today are comprised of a canine and a state or local law enforcement officer. For these teams, TSA provides and trains the dog, trains the handler, provides training aids and explosive storage magazines, and conducts on-site canine team training and re-certifications. TSA partially reimburses each participating agency for operational costs associated with maintaining the teams, including veterinarians' fees, handlers' salaries, dog food, and equipment. In return, the law enforcement agencies agree to use the canines in their assigned transportation environment for at least 80 percent of the handler's duty time. State and local law enforcement participation in the program is voluntary, and these organizations play a critical role in TSA's mission to ensure the safe movement of commerce and people throughout the Nation's transportation security environment.

In addition to state and local law enforcement-led teams, TSA handlers lead 372 funded canine teams, including Passenger Screening Canine (PSC) teams, which are specifically trained to detect explosives' odor on passengers and property as they traverse the terminal, in addition to their conventional explosives detection role. This number includes fifty new teams that were funded by Congress in FY 2017 appropriations.

TSA and state and local law enforcement handlers travel from across the country to TSA's CTC, located at Joint Base San Antonio-Lackland, to be paired with a canine and complete a 10-12 week training course. The canine teams learn explosives detection in an intense training environment, using 17 venues located on the CTC premises that mimic a variety of transportation sites such as a cargo facility, airport gate, passenger screening checkpoint, baggage claim area, aircraft interior, vehicle parking lot, light rail station, light rail car, and air cargo facility, among others. Teams are trained to detect a variety of explosives based on intelligence data and emerging threats.

Once a team graduates from the training program, they return to their duty station to acclimate and familiarize the canine to their assigned operational environment. Approximately 30 days after graduation, an Operational Transition Assessment (OTA) is conducted to ensure each team demonstrates operational proficiency in their environment. OTAs include four key elements: the canine's ability to recognize explosives' odors, the handler's ability to interpret the canine's change of behavior, the handler's ability to conduct logical and systematic searches, and the team's ability to locate the explosives' odor source. Upon successful completion of the OTA, NEDCTP canine teams are then evaluated on an annual basis under the most stringent of applicable certification standards.

TSA allocates canine teams to specific cities and airports utilizing risk-based criteria that take into account multiple factors, including threat, passenger volume and throughput, and number of insiders with access to secure areas of the airport. PSC teams are critical to TSA's risk-based security efforts and are deployed to operate during peak travel times at 42 of the Nation's largest airports, where they have the opportunity to screen tens of thousands of passengers every day. PSC teams are trained to conduct traditional screening of objects such as luggage, cargo, and vehicles, and are an especially flexible security option. The additional teams, recently funded by

Congress, will expand our ability to respond to transportation plots whether they target public areas, passenger screening checkpoints, or leverage an insider with access to the secure area.

In addition to deployments at passenger screening checkpoints, TSA and law enforcement-led teams conduct a variety of search and high visibility activities that address potential threats throughout the transportation domain. For example, canine teams provide visible deterrence and conduct explosives detection operations in transportation system public areas, and also conduct operations that mitigate insider threats in secured areas.

Canine teams have been proven to be one of the most effective means of detecting explosive substances. They are critical to TSA's focus on security.

S&T's Detection Canine Program

S&T's Detection Canine Program has historically focused on specific explosives threats facing the homeland and how we can better understand the strengths and limitations of the specially-trained explosive detection canine. As a result, we can then inform our partners on how to best utilize this extremely capable detector in a comprehensive concept of operations. S&T maintains open lines of interaction with CBP and FEMA to address challenges with narcotics detection, human tracking, and urban search and rescue. In 2017, the scope of the detection canine program at S&T officially expanded to an all-threats focus.

The S&T canine program has three specific focus areas:
•   Development and testing of canine training aids: Primary focus has been on (1) low-cost, non-hazardous training aids that can be used to improve and test canine ability to detect new threats and (2) a laboratory instrumentation method to measure the training aid at or below the level of the detection of the canine.
•   Canine operational testing and evaluation: Provide an expert independent operational test and evaluation capability for detection canines, discover canine strengths and weaknesses by performing in-field assessments, and use a scientifically-rigorous approach with statistically-significant results to enhance and validate testing methods.
•   Canine research and development structure and function: Focus on more basic understanding of canine behavior, genetics, olfaction, and cognition of this detector to improve operational efficiencies and training methods.

S&T's PBIED canine initiative was started in 2012 to understand the strengths and limits of canines specially trained to detect PBIEDs being carried by people, either on their person or in bags, in mass transit and large crowd event operational environments. S&T is the first to conduct this type of parametric study and testing, which is critical to scientifically determine the limits of performance.

In 2017, the Detection Canine Program transitioned a patented non-hazardous peroxide-based training aid for operational use by the TSA canine program. This training aid addresses the threat used in Brussels and Paris and allows for use in operational scenarios including vehicle, baggage, and person-based threats. This aid is in use by all TSA canine teams at over 100 airports

nationwide. The aid is also licensed for commercial production and sale to over 4,000 domestic explosive detection canine teams in the law enforcement community.

S&T has established critical enduring capabilities to facilitate rapid response to emerging threats. Coupling partnerships with National Capital Region detection canine teams and world-renowned laboratory analysis capabilities has allowed an integrated approach to our test and evaluation focus. S&T's contributions to the Homeland Security Enterprise include understanding of both the inherent capacity for the canine to detect a new threat and how to establish proficiency where needed. S&T, supporting DHS and interagency partners, has contributed rapid determinations of the canine detection capability on many threats.

S&T has established strong international partnerships for explosives detection canine use that have significantly impacted our international air cargo policy. In 2015, at the request of TSA, S&T conducted extensive assessments of the use of Remote Explosive Scent Tracing (REST) methodologies - which involves detection canines inspecting vapor samples on special filters - in the United Kingdom (UK), France and the Netherlands to determine if the screening method met or exceeded TSA standards for explosives screening. Following S&T's work, the TSA Administrator authorized incoming air cargo from Dutch and French airports that use REST. Additionally, S&T identified improvements that could be made to the UK's methodology. This input informed the UK to re-evaluate their certification methods and improve their screening methodology for detection of explosive materials in air cargo.

This year, S&T's detection canine program launched the Regional Explosives Detection Dog Initiative (REDDI) in support of the state and local law enforcement canine community. This extends outreach for our program to the state and local community to create better partnerships and validate capability gaps. REDDI events aim at advancing the knowledge and capability of our Nation's explosive detection canine teams. S&T will provide a series of regionally-based events for detection canine teams in the law enforcement community, including odor recognition trials, reality-based operational search scenarios, odor exercises and demonstrations, shared knowledge on IEDs emphasizing homemade explosives, and an overview on explosive odor chemistry. The first REDDI event was held in southwest Florida in March 2017, with a second event in Connecticut in April 2017. Several events are planned throughout the country in the coming months. Alongside canine teams gaining valuable experience and an independent evaluation of their operational readiness, S&T gathers valuable data to validate current program priorities, guide future investments, and increase the knowledge base to share with the whole detection canine community.

S&T has already begun to expand into other mission areas with potential to benefit from canine detection:
•   S&T has a Memorandum of Agreement with FEMA to address some of the challenges of urban search and rescue teams. S&T is in the second phase of development of a canine-wearable vest that will provide fully-stabilized video, high-fidelity location in GPS-denied situations, and communications from canine to handler to command center. This effort is executing through S&T's Small Business Innovative Research Program.
•   The canine program is also one of the first participants in S&T's Silicon Valley Initiative Program, through which the Department reaches out to non-traditional performers and those who

have not previously contracted with the government to address DHS research and development needs.
• S&T has an active effort with CBP to identify canine-wearable technologies that monitor health of the canine while being ruggedized to survive the environments where they train and deploy.

The Detection Canine Program is a prime example of how S&T helps operators and end users in the Homeland Security Enterprise harness science and technology to more effectively and efficiently achieve their missions. The program has been enormously successful building a detection canine community and using that community to develop and transition powerful new capabilities to operators.

Conclusion

DHS's canine teams offer unique capabilities across various disciplines and can be deployed throughout diverse operating environments, and will continue to consistently adapt to meet the DHS mission while providing a more mobile and rapid response in order to lead the way into the future. Thank you for the opportunity to discuss this important program with you today.

Testimony of

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Before the House Committee on Homeland Security's Subcommittee on Oversight and Management Efficiency

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Chairman Perry, Ranking Member Correa and members of the subcommittee, thank you for the opportunity to testify as a representative of the South Florida Urban Search and Rescue – Florida Task Force Two (FL-TF2) regarding the important role of urban search and rescue Canine Search Teams in local, state, national, and international disaster response. Canines have been an integral component in search operations since the inception of urban search and rescue task forces, and their – role of locating survivors and victims of natural and man-made disasters is vital to this important capability's success.

In 2005 I was deployed with a Veterinary Medical Assistance Team to the states of Mississippi and Louisiana in response to Hurricane Katrina. During that response, for five weeks following Hurricanes Katrina and Rita I had the opportunity to work with Canine Search Teams from Federal Emergency Management Agency's (FEMA) National Urban Search and Rescue Response System (the System) deployed to the above-mentioned states. After witnessing the work these dogs were doing in such extreme environments, I began training with the System's Maryland Task Force- One (MD-TF1) to gain more insight into the medical needs of System canines. In 2007, I became an official member of MD-TF1 as the task force veterinarian and ultimately a canine handler. When my canine and I successfully passed our first FEMA Canine Search Team Certification Evaluation in 2009, we were certified as a deployable Canine Search Team for local, state, and national disaster response. Since relocating to Florida in 2010, I have been the task force veterinarian and a canine search specialist for South Florida Urban Search and Rescue Task Force/Florida Task Force Two (FL-TF2), sponsored by the City of Miami. It is in my capacity as a canine handler of two nationally certified Live Find and one nationally certified Human Remains Detection dogs that I provide this testimony on the critical role canines perform in disaster response.

Background
Urban search and rescue task forces were first developed in the early 1980s by some local jurisdictions to provide response to structural collapse with advanced technical search and rescue capabilities. After several international responses (1985 Mexico City earthquake, Luzon 1990, Armenia 1988) and national responses (1989 Hurricane Hugo, 1989 Loma Prieta earthquake) it was recognized that expansion of this capability would provide critical response infrastructure. Starting with 25 task forces sponsored by local and regional fire departments, the System was formed by FEMA in 1992. Deployed under Emergency Support Function #9 (ESF #9) these task forces provide the technical expertise and equipment in search and rescue for disasters ranging from individual structural collapses to wide-spread natural or man-made disasters.

A National Incident Management System (NIMS) compliant type 1 US&R task force is composed of up to 80 personnel who perform search, rescue, medical, and technical operations along with other personnel who provide leadership, administrative, communications, planning, and logistical support. Each System type 1 US&R task force's search component must deploy with a minimum of four certified Live Find Canine Search Teams (CST-LF). Without these CST-LF members the entire task force may not deploy, which emphasizes the critical role that these members play.

Role of Canines in Urban Search and Rescue
While it has been documented for people to survive in a collapse up to 13-14 days, these are the exceptions and many factors contribute to people surviving for any duration after the event. Potential injuries suffered in the event, weather, and an individual's need for water and food are just some of the factors that result in a necessity for rapid rescue to improve survival.   This is where a CST-LF is vital: to provide rapid identification of survivors and their location so that they can be rescued. With approximately 250 million olfactory receptors, compared to a human's five million, a dog's superior sense of smell make them profoundly effective detectors when well trained for specific scents. A CST-LF canine is trained to detect the location of the "hidden" live human scent. These canines are capable of identifying survivors quickly and accurately and are superior to any technology in this vital search role.

Canine Search Teams
Canine Search Teams are comprised of a single handler and their canine who must undergo a rigorous training and testing regime in order to be a deployable asset. Handlers are composed of fire fighters, law enforcement, and civilians. The primary responsibility of the care of the canine falls to the handler, and as such they become part of the handler's family who will care for them through retirement and the remainder of their life. A majority of all the canine's expenses are also borne by the handlers. These expenses include food, general veterinary care, veterinary expenses for illness and injury, and training equipment and expenses.   A Sponsoring Agency may provide some funding for these expenses, but provision of this support varies throughout the System. In addition, the dogs are typically purchased or adopted by the handler, though some System Sponsoring Agencies provide dogs for their handlers.

Canines trained and certified for US&R work are acquired from multiple sources. Some handlers will purchase puppies or adolescent dogs without any training through kennels that breed working dogs, other candidates may be selected from rescue organizations after careful screening for the qualities a US&R canine needs to be successful. Another source for US&R canines are kennels and non-governmental organizations that breed and/or train canines specifically for US&R work where handlers or task forces may purchase canines who have been screened and received most of their foundation training. Selection of the appropriate canine for the job is perhaps the most critical component of a Canine Search Team. Canines to be used for US&R work have some unique qualities that set them apart from other working canines. Disaster scenes are often chaotic and environmentally extreme, canines must traverse the sites of collapsed structures quickly and efficiently, with workers and equipment operating around them. In addition to the necessary qualities of all search canines such as a good nose, health, drive, and trainability, US&R canines must also have incredible nerve, strength, and agility in order to be able to work in the disaster environment. Only a small subset of canines has all these important qualities to make them successful in US&R search operations and achieve CST-LF certification.

There is a significant commitment on the part of a handler to prepare and maintain a canine for US&R deployment. They routinely complete hundreds of training hours every year just to maintain proficiency. Prior to their first Certification Evaluation these hours may be doubled to appropriately prepare both the handler and the canine for the evaluation. It takes, on average, 12-18 months to fully train a canine for its Certification Evaluation. Within the System, Canine Search Teams re-certify every three years.

Canine Search Teams – Live Find (CST-LF)
While CST-LF have been a vital component of the US&R task forces since their inception in the early '80s a standardized evaluation process was not implemented for System use until 2004. Currently, certification within the System is done in two parts. The first testing component is the Foundation Skills Assessment (FSA) which evaluates obedience, direction and control, alert commitment, agility, and basic search skills. After successful completion of the FSA, a Canine Search Team is then eligible to go through the Certification Evaluation process. The Certification Evaluation is the final test required by the System and successful completion is required for deployability. This test is comprised of two complex rubble pile searches where the testing canine search team must locate up to six "survivors" without any false alerts in order to pass. These Certification Evaluations provide the System a mechanism to assure that its CST-LFs meet the minimum standards for deployment. However, a CST's training does not end there, it will continue throughout the entire career of both the handler and the canine.

As of March 2017, there are 255 CST-LF teams among the System's 28 task forces with an average canine age of 6.5 years. Labrador Retrievers make up a majority of the certified CST-LFs at 60%, with Belgian Malinois (13%), Golden Retrievers (6%), German Shepherds (6%), mixed breed (6%), and a variety of other breeds making up the remaining of the canines. A certified US&R canine will typically work until 10-12 years of age.

Canine Search Teams – Human Remains Detection (CST-HRD)
CST-HRD are a relatively new component of US&R task forces and were implemented by the System in 2014. Unlike CST-LF, certified CST-HRDs are not mandatory for deployment of a System task force. Just like with CST-LFs, support of CST-HRDs by System task forces is also voluntary. While the primary role of the US&R task forces is to identify, and rescue survivors, after the searches for survivors has been concluded, and if people remain missing, CST-HRDs may be deployed. The work of the CST-HRD is to locate victims and help bring closure to the friends and families of those who did not survive a disaster. These CST-HRDs work in close coordination with federal, state and/or local law enforcement and coroner's offices that are responsible for identification and processing of detected remains. The 2014 response to the SR-530 Mudslides exemplifies the role of the CST-HRD in disaster response. On March 22, 2014, an unstable hillside collapsed engulfing an entire community in Oso, WA and the initial response was carried out by local and state first responders. The State of Washington activated and deployed Washington Task Force One (WA-TF1), one of the System's 28 task forces, as a local resource. At the request of the State and FEMA Region X, the System deployed an Incident Support Team (IST) and California Task Force Seven (CA-TF7) to support ongoing operations. Local and regional CST-LFs worked tirelessly with other first responders to locate both survivors and victims of the slide. On April 2, 2014 twenty CST-HRDs were deployed from nine different System task forces to augment ongoing recovery

operations. Working alongside state and local responders, at the end of official search and recovery operations CST-HRDs from the System helped locate all but one of the 43 victims.

Selection, training, and certification of a CST-HRD canine is similar to that of a CST-LF. Certification for deployment is based on the CST-LF FSA but has only one component. For the CST-HRD Certification Evaluation, obedience, direction and control, alert commitment, agility, and basic search skills in a disaster environment are tested for human remains detection.

Currently there are 74 certified CST-HRDs in the System, with an average age of 6.9 years. Like the CST-LF they are primarily Labrador Retrievers (50%), with the remainder being German Shepherds (15%), Malinois (10%), Mixed Breed (6%), and other breeds. A CST-HRD in the System also recertifies every three years and is expected to retire at 10-12 years of age.

Summary
Canine Search Teams have an important task in disaster response on a local, regional, national and international scope to help locate both survivors and victims. CST handlers are extremely dedicated responders who volunteer significant time and expense to assure that they and their canines are prepared to respond to any disaster situation, at any time, in any location. They are a valuable asset to the National US&R Response System and it has been my honor to serve as a handler on both a CST-LF and CST-HRD, as well as a Veterinarian caring for working canines since 2005. I hope to see support continue for these canines and their vital role well into the future.

Thank you, Chairman Perry, Ranking Member Correa and members of this subcommittee for the privilege of providing testimony on the role of Canine Search Teams in disaster response.