INNOVATIONS IN SECURITY: EXAMINING THE USE OF CANINES

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON
INTERGOVERNMENTAL AFFAIRS

OF THE

COMMITTEE ON OVERSIGHT
AND GOVERNMENT REFORM

AND THE

SUBCOMMITTEE ON TRANSPORTATION AND
PROTECTIVE SECURITY

OF THE

COMMITTEE ON HOMELAND SECURITY

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C O N T E N T S

INNOVATIONS IN SECURITY: EXAMINING THE USE OF CANINES

Tuesday, October 3, 2017

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON INTERGOVERNMENTAL AFFAIRS,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM, JOINT
WITH THE SUBCOMMITTEE ON TRANSPORTATION AND
PROTECTIVE SECURITY, COMMITTEE ON HOMELAND SECURITY
Washington, D.C.

The subcommittees met, pursuant to call, at 2:20 p.m., in Room 2154, Rayburn House Office Building, Hon. Gary J. Palmer [chairman of the Subcommittee on Intergovernmental Affairs] presiding.

Present: Representatives Palmer, Katko, Grothman, Rogers, Higgins, Estes, Demings, Watson Coleman, DeSaulnier, and Keating.

Mr. PALMER. The Subcommittee on Intergovernmental Affairs of the Committee on Oversight and Government Reform and the Subcommittee on Transportation and Protective Security of the Committee on Homeland Security will come to order.

Without objection, the chair is authorized to declare clarify a recess at any time.

Before I begin my opening remarks, I would like to recognize the United States Capitol Police Canine Technician Jason Conlon and his four-legged partner, Jax. Thank you for coming. And Jax is pretty popular in this hearing.

I thank you both for attending today's hearing. I think I speak for all of my colleagues here today when I say thank you for all you do to protect the complex and this Nation. And having been one of the Republican members on the baseball field that morning, I know the willingness of the Capitol Police to pay the ultimate sacrifice for us. And that is literally what Officers Griner and Bailey did. They put themselves in harm's way for us, and we are all profoundly grateful for the service of our Capitol Police.

Technician Conlon and Jax are an important reminder that canines are an integral part of our national security framework and serve in all levels of our government. From the United States Capitol to local municipalities, canine teams are working to save lives every single day. Dogs like Jax provide unmatched capabilities to secure our safety, including the detection of explosives, narcotics, concealed humans, currency, firearms, electronics, and chemicals, and are also used in search-and-rescue missions. Simply put, canines are an invaluable asset to our country.

Over recent years, international demand for canines has increased dramatically. Experts report that this heightened demand

has led to a shortage of suitable canines, making it difficult for the United States Government to obtain the working dogs it needs.

TSA has reported that the Federal Government is working to improve and expand relationships with domestic vendors. This is a step in the right direction, but more work needs to be done. Efforts to obtain more dogs have reportedly been slow to materialize. In a May 18, 2017, hearing, TSA's Threat Assessment Division Director Melanie Harvey testified that TSA is working very closely with domestic vendors to build up the canine supply but has not identified a large enough supply to domestically do that.

Industry professionals and domestic vendors have also reported difficulties in working with the government's canine procurement programs, citing challenges in getting their dogs accepted for work.

We are hoping today's hearing will serve as a starting point toward resolving those challenges. My primary hope for this hearing is that it will help us evaluate how we can increase the use of canines in areas that are clearly vulnerable to attack, including public areas of our airports, train stations, as well as other areas with high concentrations of people. To that end, we have a diverse panel of professionals today who will present information and ideas about how our government uses canines. And I look forward to hearing what they have to say.

We must ensure that government agencies are able to purchase qualified canines so that they can meet their critical national security missions.

I thank Chairman Katko for his leadership and partnership on this issue. I thank Ranking Member Demings. I have had conversations, extensive conversations, with both of them that really led to this hearing. And I am very grateful for the work that they put in on this.

Clearly, this is an area that we can all agree deserves our attention and support.

I now recognize the ranking member of the Subcommittee on Intergovernmental Affairs, Mrs. Demings, for her opening statement.

Mrs. DEMINGS. Thank you, Mr. Chairman, and thank you to our witnesses for joining us here today.

Before we begin, I do want to take just a moment to acknowledge the tragedy that occurred in Las Vegas. I imagine that we all have reflected on what happened. And as a former chief of police, I can tell you I have had many sleepless nights wondering what I could do to keep my community safe, let alone trying to understand what would lead somebody to commit such an unspeakable act.

When President John F. Kennedy was speaking of foreign threats, I believe his words go to the heart of what each first responder holds within to do their own work. I quote him: We shall pay any price, bear any burden, meet any hardship to keep America safe.

With that, I turn back to the subject for which we are here today.

On this day, we have the opportunity to discuss the crucial role that canine security plays in protecting our local airports, transportation hubs, sports arenas, stadiums, and other large venues. Prior to serving as Orlando's police chief, I served as commander of the

Special Operations Division where I had the honor of managing our canine operation.

My colleagues on the other side of the aisle argue that more canine security is needed. I agree. Unfortunately, the President's budget proposal would cut State and local programs. Under the budget proposal, TSA's Visible Intermodal Prevention and Response Teams, which patrol public spaces in airports, train and bus stations, would be eliminated.

Under the budget proposal, the Law Enforcement Officer Reimbursement Program, which provides support to local airports by placing local law enforcement teams alongside TSA checkpoint officers, would be gutted. This would cut $45 million in funding that reimburses local police departments for canine security at more than 300 local airports. I believe such cuts would put our State and local security forces in jeopardy.

Our Nation's security is my top priority and should be Congress' number one priority. Congress must stand with State and local police.

And with that, I again thank our chairman for this opportunity and thank our witnesses for sharing their testimony today. And I look forward to this very important discussion.

Thank you.

Mr. PALMER. I now recognize the chairman of the Subcommittee on Transportation and Protective Security, Mr. Katko, for his opening statement.

Mr. KATKO. Thank you, Mr. Chairman.

Before I proceed, I do want to acknowledge the tragedy in Las Vegas.

As a Federal organized crime prosecutor for 20 years, I made it my life's mission to take dangerous weapons out of the hands of dangerous people. But this gentleman points up a specifically difficult person to detect, and we got to—we have to learn how to do better to detect people like that that have gone off the grid, so to speak.

So, with that, I will talk to a little happier subject, and that is dogs. My dog, Sadie, is happy I am here today. I told, before I came down, my black lab, that I would be testifying—I would be asking questions of all of you, and she said to say hello.

Canines are an essential asset to our national security. Due to their intelligence, superior sense of smell, and versatility, canines provide an unparalleled service to law enforcement. When canines' natural abilities are supplemented by selective breeding, training, and cutting-edge developments in science, they became one of the most effective security tools for public safety. While the utility of one certain technology over another does ebb and flow based on how terrorists seek to do harm, the security benefits of canines will always been a crucial element to keeping Americans safe. And I want to commend my colleague to my left here, Mr. Rogers, who has been championing this cause for many years, at least since I have been in Congress the last 3 years, and I know long before that as well.

The concept of a working dog is not unfamiliar to most Americans. They are a viable presence in airports, train stations, and other public areas. From my experience as chairman of the Home-

land Security Committee's Subcommittee on Transportation and Protective Security, I have seen firsthand the data proving the security effectiveness of canines in mitigating the rapidly evolving threat landscape facing America's transportation systems. Oftentimes, canines present the most effective and efficient means of detecting new threats—again, I stress effective and efficient—as they can be retrained and deployed as new threat streams and terrorist tactics emerge. Canines are utilized in a variety of different settings and roles for the detection of people, narcotics, and explosives, and weapons of mass destruction, amongst many other items.

As we strive to be proactive in mitigating threats to the traveling public in transit hubs, airports, and other venues, canines are an essential component of our ability to enhance security. Because of their versatility and reliability, canines are increasingly sought after by Federal, State, local, and Tribal agencies, as well as private stakeholders and foreign governments. This spike in demand for canines both domestically and internationally far outstrips our current ability to produce an adequate supply of dogs. The United States is competing with many other nations to procure canines that meet rigorous standards. And a shortage of quality dogs presents an impending security risk. In an era of heightened terrorist activities, it is critical that the domestic working canine industry has a robust development and training pipeline that feeds into a seamless procurement process.

The purpose of today's hearing is to learn more about the challenges that the canine industry faces. We also want to ascertain how we can better develop a strategy and more reliable infrastructure for domestic breeders and training facilities. Lastly, we want to learn how the United States Government can better communicate its needs with its private sector canine partners to help facilitate future growth of this essential security asset. A strong domestic breeding industry not only makes all of us safer but creates new jobs and opportunities in our communities. I think it would be great if we got to a point where we stopped importing dogs from Belgium and wherever else and had the programs here and maybe got it to such point where we are exporting them around the world because the quality is that good.

However, we have to make our government—we have to make sure our government is doing everything it can to present a strategic and comprehensive vision for its canine needs and that this vision is effectively communicated to the industry in order to foster necessary growth.

We must also ensure that, with the rapid increase in demand for canines, we are ensuring the quality of our security standards and procuring only the most highly trained canines. We must also ensure that we are properly incentivizing breeders and trainers to meet the demand for canines today and far into the future.

Ms. Goffe, Lieutenant Smith, and Dr. Otto, I encourage all of you today to be candid and frank in your testimony. We convene this hearing in order to hear directly from each of you about how Congress can better support this critical layer of our national security. We all share the same goals, and we all want to better understand what obstacles currently exist that may prevent the growth of our domestic canine industry. Canines are an invaluable safety and se-

curity asset. And the need for more canines will only continue to grow.

I would like to thank my colleagues Chairman Palmer, Ranking Member Demings, and Ranking Member Watson Coleman for joining me in calling for this hearing today.

Security is not a partisan issue. That is one of the things we truly enjoy about Homeland Security is that it is not a partisan issue. And we must work together in a bipartisan fashion to advance important issues that affect the safety and security of all Americans.

And, with that, I yield back.

Mr. PALMER. The chair now recognizes the ranking member of the Subcommittee on Transportation and Protective Security, Mrs. Watson Coleman, for her opening statement.

Mrs. WATSON COLEMAN. Thank you, Mr. Chairman.

Thank you to the members of both subcommittees for convening this hearing and to the witnesses for being here today.

I would to begin by acknowledging Sunday's horrific mass shooting in Las Vegas as well. Our thoughts and our prayers are with the victims, their families, and their loved ones. I also want to thank the law enforcement officers and first responders who bravely rushed to the scene and attended to the victims.

While we are still learning the details of this tragic event, it is a sobering reminder of the harm a single actor can cause when he has violent intent and access to deadly weapons.

Sunday's attack comes a little more than a year after the Pulse nightclub shooting in Orlando. Until Sunday, the Pulse attack was the deadliest mass shooting in modern American history.

Lieutenant Smith, I understand you were part of the law enforcement response to that shooting, and I thank you for your service.

While it may not be the stated topic of this hearing, considering recent events and the renewed urgency to take up comprehensive gun safety reform, Lieutenant Smith, I hope that we can hear from you today on some of the lessons you learned from that tragic experience and some of the suggestions you have for my colleagues here in Congress on what we can do to address this epidemic of gun violence.

While we may never know what drove the killer to indiscriminately fire upon concertgoers, what is undeniable is that it terrorized innocent law-abiding citizens. Congress has an obligation to pass commonsense gun control reforms to reduce the lethality of future attacks.

As a ranking member of the Subcommittee on Transportation and Protective Service, I am all too familiar with the diverse security threats our Nation faces. While this shooting shows that any large gathering can be targeted for attack, terrorists continue to place particular importance an attacking transportation systems. Soft targets, such as subways, mass transit stations, and public airport areas, have been targeted in the United States and abroad. Securing these critical transportation systems requires a layered risk-based approach. While no one technology or solution can provide unbeatable scrutiny—security, canines have proven to be one of the most effective tools for securing large venues open to the public.

Under the Obama administration, the TSA more than doubled the size of its canine program, growing from the number of canine teams from 518 in 2008 to 1,047 in 2017.

At my home airport of Newark Liberty International Airport, TSA now deploys 13 canines to support their operations. TSA provides an additional 20 canines to the Port Authority of New York and New Jersey for deployment at all of its transportation systems.

Although I have been pleased by the continued investment in canines, I must note that they have been deployed disproportionally to securing aviation compared to other transportation sectors. TSA devotes more attention and resources to aviation than surface transportation in general. Many of the TSA's technology that are in use at airport security checkpoints cannot be effectively integrated into bustling train stations and other active surface transportation venues.

However, canines are mobile and able to detect explosives both on persons and in baggage. They work well in crowds, and they can be trained to detect evolving threats. There is also some evidence that they serve as a deterrent to those who may be planning an attack. TSA must devote more of its resources to securing surface transportation systems, particularly in light of AQAP's publication of its latest issue of Inspire Magazine last August which encouraged and provided instructions for attacks against U.S. railways. Ensuring that there are dedicated canine resources available to help secure high-risk surface transportation would be a perfect place to start.

To that end, I will be introducing a bill to revamp and invest in surface transportation security programs in the near future, and I hope my colleagues would give it their support.

Again, thank you to the witnesses for appearing here today, and I look forward to learning more about the capabilities and the contributions of canines to our national security.

And, with that, Mr. Chairman, I yield back. Thank you.

Mr. PALMER. I thank the gentlewoman.

I am pleased to introduce our witnesses. Ms. Sheila Goffe, vice president of government relations for the American Kennel Club; Lieutenant Scott Smith of the Orlando, Florida, Police Department; and Dr. Cynthia Otto, executive director of the Penn Vet Working Dog Center at the University of Pennsylvania School of Veterinary Medicine.

Welcome to you all.

Pursuant to Oversight Committee rules, all witnesses will be sworn in before they testify.

Please rise and raise your right hand.

Do you solemnly swear to—or affirm that the testimony you are about to give is the truth, the whole truth, and nothing but the truth, so help you God?

Thank you.

The record will reflect all witnesses answered in the affirmative.

You may be seated.

In order to allow time for discussion, please limit your testimony to 5 minutes. Your entire written statement will be made part of the record. As a reminder, turn on your microphones when you are testifying. The clock in front of you shows your remaining time for

giving your testimony. The light will turn yellow when you have 30 seconds left and red when your time is up. And then the gavel will remind you that the light turned red.

I would like to recognize the witnesses for the testimony. Ms. Goffe, if you would.

WITNESS STATEMENTS

STATEMENT OF SHEILA GOFFE

Ms. GOFFE. Thank you, Chairman Palmer, Chairman Katko, Ranking Members Demings and Watson Coleman, and other distinguished guests. It's a pleasure to be here in Washington today. And on behalf of the American Kennel Club, I thank you for the opportunity to share with you some of our concerns and experiences with respect to the need, demand for, and use of military working dogs, particularly explosive detection dogs, and ways that improving the domestic sourcing of detection dogs can help protect our national security.

The American Kennel Club was founded in 1884 by a group of sportsmen and dog enthusiasts who wished to record and preserve the bloodlines of their working dogs and advance the capabilities for future generations. Today, more than 130 years later, the AKC remains dedicated to protecting and advancing the unique capabilities of purpose-bred dogs as part of our mission of promoting purebred dogs and thoughtful, purposeful breeding for type and function.

The AKC is a not-for-profit organization and national club of more than 5,000 member and affiliated clubs around the country. In 2016, AKC sanctioned 22,000 dog-related events throughout the country in disciplines ranging from confirmation dogs shows to field trials, agility, and obedience.

Earlier this year, we established a competitive sport based on scent detection. AKC is also the largest all-breed registry in the world. We are dedicated to advocating for the purebred dog as a working and family companion, advocating for canine health and well-being, advancing the study and breeding of purebred dogs, and promoting responsible dog ownership.

We have a long history of helping the government with military working dog programs. In World War II, some 17,000 AKC registered dogs served in the Dogs for Defense Program. In the last decade, AKC board member Carmen Battaglia has been an advisor to the TSA breeding program at Lackland Air Force Base providing expertise on breeding strategies and puppy-raising protocols, such as early neurological stimulation to improve long-term outcomes for successful military working dogs.

Over the course of this interaction, AKC was asked how we might be able to assist the development and procurement of quality domestically bred dogs suitable for training as military working dogs. The AKC does not sell dogs nor do we seek to become a government contractor. The AKC brings a breadth of knowledge, a large network of breeders, and the expertise and ability to facilitate among a range of stakeholders. We see our role as a facilitator who can provide expertise and information to breeders to bring them to-

gether with cutting-edge research in agencies that need very specific types of dogs that can succeed as military working dogs.

As mentioned earlier, military working dogs play a critical role in our national security. According to sources within and outside the Federal Government, 80 to 90 percent of the dogs purchased by the Homeland Security and Department of Defense come from foreign sources. As Americans, we should be concerned that an extraordinarily high percentage of the dogs that serve on the front lines of protecting the public, our public institutions, and our national security are obtained from foreign sources.

About a year ago, AKC formed a team to gather information about American use and procurement of explosive detection dogs, the challenges faced in having enough fully trained deployable dogs to meet demand, and how changes in breeding and procurement might improve outcomes. We have met with officials at the Department of Defense, the TSA, private vendors, government and private contractors, academia, and law enforcement. We found a range of concerns regarding an overreliance on foreign bred and procured dogs, a lack of transparency and consistency in the selection process for untrained, or green, dogs. We found high failure rates among both foreign and domestic dogs and procurement processes that intimidated potential suppliers and could favor foreign dogs over domestically bred dogs. We also heard concerns that outcomes from scientific research on improving performance and efficiency within our training programs were not being implemented consistently.

In March, AKC hosted the U.S. Dog Detection Conference in Raleigh, North Carolina. The conference assembled key stakeholders from government, academia, the private sector to discuss ways that AKC could provide dogs to protect the safety and security of the United States and advance the concept of a working dog center of excellence.

We plan to make this conference an annual event and would like to extend an invitation to the conference and to members of the House Homeland Security Oversight and Government Reform Committees and the appropriate staff to attend our next conference.

At this conference, and I note Dr. Cindy Otto will also speak about this, we looked at a number of challenges and a number of opportunities. We looked at ways that we could come together to provide the expertise, the knowledge, the training, the cutting-edge science all together as part of a center for canine excellence for working dogs. We plan to continue to work towards that future.

And I would be very happy to answer any questions you might have about the specifics of the plans to bring together this expertise and the ways that we would like to be able to assist in this process.

Thank you very much.

[Prepared statement of Ms. Goffe follows:]

AMERICAN KENNEL CLUB

Testimony of
Sheila Goffe
Vice President, Government Relations
American Kennel Club

Before

U.S. House of Representatives
Committee on Oversight and Government Reform
Subcommittee on Intergovernmental Affairs

And

Committee on Homeland Security
Subcommittee on Transportation and Protective Security

On

"Innovations in Security: Examining the Use of Canines"

October 3, 2017
Washington, DC

Introduction

Chairman Palmer and Chairman Katco; Ranking Member(s) Demming and Watson Coleman, and other distinguished guests.

It is a pleasure to be here in Washington today. On behalf of the American Kennel Club (AKC) I thank you for the opportunity to share some of our concerns and experiences with respect to the need, demand for and use of military working dogs, particularly explosives detection dogs, and ways that improving the domestic sourcing of detection dogs can help protect our national security.

Background/AKC Mission

The American Kennel Club (AKC) was founded in 1884 by a group of sportsmen and dog enthusiasts who wished to record and preserve the bloodlines of their working dogs and advance their capabilities for future generations. Today, more than 130 years later, the AKC remains dedicated to protecting and advancing the unique capabilities of purpose-bred dogs as part of our mission of promoting the purebred dog and thoughtful breeding for type and function. The AKC is a not-for-profit organization and national club of more than 5,000 member and affiliated clubs around the country. In 2016, AKC and affiliated clubs sanctioned over 22,000 dog-related events throughout the country in disciplines ranging from traditional dog shows, hunting filed trials to dock diving. This year, AKC established a competitive scent detection sport.

We are also the largest all-breed registry in the world (and registered more than 1 million puppies in 2016). We are dedicated to advocating for the purebred dog as a working and family companion, advancing canine health and well-being; advancing the study, breeding and preservation purebred dogs; promoting responsible dog ownership; and working to protect the rights of all dog owners.

The AKC has a long history of helping the United States government with military working dog programs. During World War II, some 17,000 AKC registered dogs served in the Dogs for Defense program.

How AKC Got involved

In the last decade, AKC Board member Dr. Carmen Battaglia has been an advisor to the TSA Breeding Program at Lackland Air Force Base, providing expertise on breeding strategies and puppy raising protocols such as early neurological stimulation to improve long-term outcomes for successful military working dogs. Over the course of this interaction, AKC was asked how we might be able to help assist with development and procurement of quality, domestically-bred dogs suitable for training as military working dogs.

The AKC does not sell dogs nor do we seek to become a government contractor. We see our role as a facilitator who can provide expertise and information to our network of breeders, and bring them together with agencies that need very specific types of dogs that can succeed as military working dogs (MWD).

Military working dogs, including patrol and protection, explosive detection and others, play a visible and unprecedented role in our national security. According to various sources within and outside the government, 80% to 90% of the dogs purchased by Homeland Security and the Department of Defense are from foreign vendors or domestic vendors who import from foreign sources. It should be noted that the Transportation Security Administration partners with the Department of Defense to purchase a significant portion of their explosive detection dogs.

As Americans we should be concerned that an ever-growing percentage of the dogs that serve on the front lines of protecting the public, our public institutions and our national security are obtained from foreign, rather than domestic, sources.

There any many factors contribute to the development, deployment, and maintenance of a successful working dog. These include breeding expertise, sound animal husbandry practices, understanding and the ability to implement advances in research and knowledge of training, health, genetics, environmental influences, developmental factors, and other factors that contribute to creating and maintaining a successful working dog. The AKC brings to the table a breadth of knowledge, a large network of breeders, and the expertise and ability to facilitate among a range of stakeholders.

Approximately a year ago, the AKC formed a team to gather information about American use and procurement of explosives detection dogs, the challenges faced in having enough fully trained, deployable dogs to meet demand; and how changes in breeding and procurement might improve outcomes.

The team met with officials at the Department of Defense, the TSA, vendors, government and private contractors, academia, and law enforcement.

AKC heard a range of concerns regarding an over-reliance on foreign-bred and -procured dogs; lack of transparency and consistency in the selection process for untrained or "green" dogs; high failure rates among both foreign and domestic dogs; and procurement processes that could favor foreign dogs over domestically-bred dogs. We also heard that outcomes from scientific research and studies on improving performance and efficiency within our training programs were not being implemented consistently.

We were advised there was a need to bring together key stakeholders to improve communication and cooperation, bridge the disconnect between breeders and end users, expand knowledge, implement best practices and research findings, to share issues and expertise, and establish centralized center of excellence for the development of working dogs. The envisioned working dog center of excellence would be the venue to bring together key stakeholders to cooperate and share this information to advance how we develop and utilize explosives detection canines.

The US Detection Dog Conference

The AKC hosted the U.S. Detection Dog Conference on Feb. 28-March 1, 2017, in Raleigh, NC. AKC's inaugural conference assembled key stakeholders from government, academia and the private sector to discuss ways that AKC could help provide dogs to protect the safety and security of the United States and advance the concept of a working dog center of excellence. We plan to make this conference an annual event.

One view for a center of excellence included a 13-page proposal co–authored by Dr. Cindy Otto and Dr. Liz Hare of the Penn Vet Working Dog Center; Mr. Scott Thomas, formerly of the Department of Homeland Security; and Dr. Eldin Leighton of Canine Genetics Services, LLC; which was presented at the US Detection Dog Conference. The proposal offered guidelines for an independent effort that would bring together the private and public sectors in a working collaboration for the purpose of breeding purpose-bred, well-trained dogs to accomplish a variety of missions needed for the safety and security of the United States. Their paper offered data, recommendations and suggestions aimed at developing a plan that could be implemented in the future based on the knowledge gained from canine behavioral science.

Twelve presenters discussed issues surrounding the recognized shortage of domestically produced explosives detection dogs and a wide range of related issues, including. the use of dogs to mitigate the threat of terror; the DOD's supply logistics; canine genetics; semen collection & storage; the uses of DNA tests; breeding models; research; and organizational management. The conference was attended by more than 60 invitees, including U.S. Government staff; academic researchers; AKC delegates and staff; staff of North Carolina members of Congress; and private detection dog trainers. A synopsis of the speakers and Their presentations is appended.

Speakers included:

Dr. Carmen Battaglia of the American Kennel Club, LTC Mathew Enroth of the US Department of Defense Military Working Dog Veterinary Service (DoDDMWDVS);

Dr. Liz Hare of the University of Pennsylvania's Penn Vet Working Dog Center;

Dr. Eldin Leighton (Research geneticist (retired) for the Army SuperDog project and past president of the International Working Dog Breeding Association;

Paul Mundell, National Director for Canine Companions for Independence;

Sgt. Wendell Nope, K-9 Training Supervisor for the Utah Department of Public Safety;

Dr. Cindy Otto, University of Pennsylvania School of Veterinary Medicine and Executive Director of the Penn Vet Working Dog Center;

Donald Roberts, Program Manager for the Detection Canine and Surface Transportation Explosive Threat Detection Programs for the Homeland Security Advanced Research Projects Agency at the Department of Homeland Security (DHS);

Scott Thomas, Manager of the Transportation Security Administration Canine Breeding and Development Center.

Outcomes

At the conference, and through subsequent meetings with key stakeholders, a better picture of major issues emerged. These include:

U.S. Overreliance on Foreign Vendors is an Avoidable National Security Risk

Following the events of 9-11, the demand for scent detection dogs has steadily risen. More bombings in the U.S., Europe and elsewhere have accelerated interest. Around the world, demand for detection dogs is increasing, with many nations seeking dogs from the same European sources that the U.S. has relied on. Additionally, it's not only governments and militaries that are seeking dogs. Non-governmental demand around the world is also increasing, especially by private entities tasked with protecting malls, movie theaters, sports complexes, schools and any place large gatherings or high profile events take place.

Most U.S. government agencies are relying almost exclusively on the importation of working dogs from Europe to meet their needs. Most private working dog trainers and private providers of security services in the U.S. are also dependent on European sources.

The estimated 80% to 90% of the dogs purchased by Homeland Security and DOD from foreign sourced come from European nations (the Netherlands, Germany and Eastern European nations) with a strong history of breeding, training and trialing dogs in police/military style competitions and certifications, and an ability to produce these dogs in large kennels.

Labrador Retrievers are the breed of choice for most explosives detection work. Labs combine a strong work ethic derived from their innate drive to hunt all day for birds combined with a low reactivity level when working in close quarters for personal searches. They also exhibit a less intimidating profile than prick-eared breeds such as Belgian Malinois and German Shepherd Dogs, which excel at protection work.

The AKC registered more than 200,000 Labrador Retrievers in 2016. With so many Lab breeders in the United States, it's ironic that the Government travels to Europe to import "green" or untrained Labrador Retrievers for admission to U.S. detection dog training programs.

Quality Concerns

American experts in the importation and training of working dogs claim that for many years the U.S. has received less than the best picks of the of working dog candidates in Europe: The best dogs tend to be retained for use in Europe. Likewise, the U.S. must compete for dogs with countries able to offer large sums in direct cash transactions (rather than government credit cards or vouchers provided by the U.S.) There are also anecdotes of different federal departments and agencies finding themselves competing against each other in Europe for the same dogs. The growing threat of terrorism and consequent demand for working dogs within Europe and around

the world, means there is now a shortage of even mediocre quality foreign dogs available to protect the United States.

Consistent, Reliable Supply

Even if quality were assured, U.S. reliance on foreign sources of detection dogs could place national security in jeopardy if an interruption in sourcing occurs due to a natural disaster or geopolitical event. A pandemic of canine disease in Europe or zoonotic disease could also easily impact this supply of dogs.

We have the knowledge, the breeding stock and breeders. It only makes sense to protect our national interests by ensuring a quality domestic supply of detection dogs.

Buy American/Train American

Current law (10 U.S.C. §2302) states a preference for purchasing dogs from U.S. breeders; however there is a disconnect between the government and breeders or vendors in understanding the requirements or standards that define an acceptable green dog, and in creating the structure to supply a steady source of dogs capable of meeting government requirements. Transparency in requirements and a cost comparison of the full cost per dog of using domestically-bred versus foreign-bred dogs should be investigated and implemented. Qualified domestically-bred dogs should have at least the same opportunity as foreign sourced dogs to become part of U.S. canine detection teams.

Some Working Dog Needs/Status (2017)

Currently, there are an estimated 10,000 working dogs in the United States, including dogs working in government, military, law enforcement, and private facilities. About 20 percent of working dogs retire each year. Working dogs typically go to work at 18 months to 2 years of age and have an average working life of five years before retirement.

The Department of Defense operates a small breeding program, primarily for Belgian Malinois, at its kennels at Lackland Air Force Base in San Antonio, TX, but the program cannot meet the total need so the DOD purchases most of its dogs in Europe.

The Transportation Security Administration (TSA) had a detection dog breeding program from 2002-2012 primarily for Labrador Retrievers, until it was closed down in 2012 due to budget cuts. When the TSA breeding program was disbanded the result was that it placed an even greater reliance on the sourcing of military working dogs from overseas sources.

With 1,000 teams deployed, TSA has a 20% attrition rate, plus a stated need for at least 100 new teams this year, so they would be seeking 321 new dogs ready to deploy before 2018.

The Customs and Border Patrol also has requested 325 additional dogs.

Overview of Evaluation for Acceptance in US MWD Program

The government evaluates untrained ("green") dogs at about 1 year of age to consider them for purchase and entry into the detection training program. The dogs must pass a stringent health examination, including hip, elbow and lumbar radiographs, and then undergo a multi-step evaluation for the following key traits:

- Sociability – Dogs must be sociable enough to be easily handled by people and to be at ease around people of all types (men, women, children), but should not be so sociable that they are distracted by the presence of people; continually pulling to see people; jumping on people, etc.
- Environmental Stability – Dogs must not show fear or nervousness around loud and/or strange noises; they must show physical rigor whether working in very hot or cold temperatures; and they must be bold and willing to walk on strange surfaces/open steps/moving surfaces like conveyor belts, etc., when working.
- Desire to Obtain Reward – The dog's drive to obtain its reward is the key to the dog working. Detection dogs are trained on toys, such as Kongs or tennis balls NS must have a very strong drive for that toy. Food is not used as it is difficult for handlers to carry, and there is too much food in the environment that could confuse the dog (airport terminals have numerous food vendors; passengers carry food with them on planes.)
- Hunting Ability – The dogs must show intense drive to keep hunting all day without getting frustrated and without giving false alerts.

Government Purchase Practices

The DOD and TSA purchase dogs from vendors who are pre-approved to sell to the government. Vendors may obtain a government contract and, after showing that they provide a high percentage of dogs that meet the standards, might be awarded a Blanket Purchase Agreement (BPA). The government places orders with BPA vendors who then must be able to fulfill the order within 30 to 60 days. The government might call with a request for 10 dogs, and the vendor then is expected to produce at least double that number as not every dog will pass the standards examination and be purchased. In recent months, we understand that DOD has relaxed some of these contracting requirements.

AKC Outreach to breeders and vendors over the last year has indicated that domestic breeder and vendors would generally be interested in providing dogs to the government for use as detection dogs, but several factors discourage them from doing so.

Government Contracting Requirements Are Challenging for Small Breeders

Many small volume breeders, on their own, do not produce sufficient numbers of dogs to engage in the cumbersome government contracting process. Some breeders indicated a willingness to

sell (or even donate) a high-quality puppy but are were held back by a lack of knowledge or ability to negotiate the transfer and complicated government contracting and payment processes.

The Economics of Domestic Puppy Rearing

Typical breeders of the types of dogs sought by the MWD programs come from sporting/field trial lines where a high-quality puppy may be sold at 8-12 weeks of age at a price comparable to what is offered by the government for a puppy of 9-12 months of age. (The federal government does not generally purchase dogs until they are 9-12 months of age and old enough to enter training programs.) The older age at which the government wants a puppy is problematic for breeders. Many kennels do not have not have facilities to maintain quantities of puppies for an additional 6 months or longer, especially with no guarantee of purchase at a later date. If breeders hold a puppy for an extra 6-9 months, and it is not accepted into a MWD training program, the puppy will then be past the ideal age for placement as a hunting dog, field trial prospect or pet. Furthermore, undertaking the necessary age-appropriate socialization and training for a future MWD during this time represents additional significant costs over and above costs incurred if the puppy had been sold at 8-12 weeks of age.

Sources inside and outside the government have stated that the DOD and TSA indicate that they are paying less for dogs purchased in Europe than from the U.S. vendors. However, with reports of increasing issues with dogs sourced from overseas, it is unclear what the actual cost differential between the two sets of dogs may be.

Likewise, some U.S. vendors are procuring puppies from Europe and bringing them back to the U.S. to socialize and sell to the Government. Vendors who do this are also having a hard time finding enough dogs to dogs to fulfill their contracts or make a profit.

Comparison of Costs Between Domestic and Foreign Dogs Should Take into Account the Additional Costs Associated with Obtaining Dogs Overseas

The Government has stated that untrained dogs purchased outside the continental U.S. are less expensive than those purchased in the U.S. However, this does not include per capita adjusted costs related to the additional expense associated with importing dogs, including: travel for the procurement team; shipping the dogs; costs of conducting health screenings and training overseas and additional screenings upon return to the US; and all expenses associated with those that fail to become deployable MWD. Language was included in the recently passed House National Defense Authorization bill that requires a detailed report on the cost of MWDs. AKC encourages the House of Representatives to insist this language be included in the final conference report.

Concerns about Transparency on Evaluations/Subjective Interpretations of Scope of Work

Vendors, breeders and government employees have expressed concerns about vague standards and inconsistent interpretations of requirements in published scopes of work for green dogs. They note this is particularly problematic for "subjective" portions of a dog's evaluation, where evaluators may have significant leeway in judging factors such as environmental stability, sociability or drive/hunting ability. Such inconsistency creates frustration and confusion about standards sought for dogs entering MWD programs. AKC repeatedly heard complaints about the use of tools for testing environmental stability that breeders/vendors felt were not relevant to or reflective of actual scenarios a dog would encounter when deployed. One vendor expressed concern about a lack of transparency and substantive feedback by evaluators when dogs had been rejected with little explanation. It would be beneficial to all parties for breeders, trainers and vendors to know how to better prepare dogs for their evaluations. Above all, the needs and performance standards by which dogs are selected should be clear, consistent and readily available to dog breeders, vendors and trainers.

Contracting Challenges

Several domestic vendors have stated that they are shifting their business model away from selling dogs to the government, and instead toward obtaining private security contracts where they provide explosives detection services with their own dogs as part of a larger suite of services. The shift in business models may address some vendors' frustrations with selling dogs, but as these vendors begin to hold onto more of their own dogs, it will further reduce the pool of qualified dogs for government purchase.

Vendors cited the reason for their changing business practices as the inability to cover their costs in selling dogs to the government. Challenges contributing to this included set asides for small business in the Federal Government contracting process. Several vendors stated that to provide the number and quality of specialized dogs needed to fulfill a contract, they had to expand to a point where they could no longer qualify as a small business. The current purchase code for MWDs is "live animals" (NAICS 112990/ PSC 8820) which has a lower threshold for definition as small business than codes for other key military or national security resources. The AKC hopes that the Federal Government will consider creating a separate NAICS code for national security-related working dogs.

Scientific Approaches Can Reduce Subjectivity, Improve Outcomes

The use of scientific research goes beyond the physical capabilities of what makes a good working dog. Advances in the science of canine behavior (cognition, bio-chemistry, genetics, neuropsychology, etc.) associated with canine behavior should also be incorporated into improving selection and development of working dogs.

Thank you for your time and interest in our findings. I am happy to answer any questions you have and I would also be willing to follow up on any questions you may have in the future.

Addendum

AKC Hosts US Detection Dog Conference

AKC hosted the U.S. Detection Dog Conference on Feb. 28-March 1, 2017, in Durham, NC, bringing together key figures in government, academics and the private sector. The conference was extremely well received, and attendees expressed appreciation for AKC in taking this step to address this issue.

Twelve presenters provided excellent talks on the reasons for the shortage and a wide range of related issues, including the use of dogs to mitigate the threat of terror, the DOD's supply logistics, canine genetics, semen collection & storage, and the uses of DNA tests, breeding models, research, and organizational management. The conference was attended by more than 60 invitees, including US Government staff; academic researchers; AKC delegates and staff; NC congressional staff members; and private detection dog trainers.

Dr. Carmen Battaglia opened the event with a welcome and opening remarks on the purpose of the conference and why AKC was involved. AKC Board Vice Chairman Carl Ashby presented an introduction to AKC and our core values, mission and purpose

Presentations included:

Sgt. Wendell Nope of the Utah Department of Public Safety serves as the K-9 Training Supervisor for more than 3,000 officers and dogs. He provided the audience with an overview of the dangers present in our cities and the need for well-trained detection dogs. He reported that in his survey of 10 states, 80 to 90% of the police dogs were imports.
Lt. Colonel Mathew Enroth, Chief of Veterinary Diagnostics at the US Department of Defense Military Working Dog Veterinary Service, Lackland Air Force Base, discussed the screening and evaluation of dogs being considered for purchase by the United States. He shared information about the government's buying trips to Eastern Europe and the issues of procurement. The primary reasons for failure of the medical requirements are included poor hips, elbows, lumbar and temperament. Other reasons include heart murmurs, heart worms, and poor body condition. He discussed the difficulties related to attracting families for puppy raising, global changes in purchasing, and the competition for working dogs with other countries who need them for their own protection.
Scott Thomas, program specialist for the TSA canine and breeding program, Lackland Air Force Base, ran the successful TSA breeding program until it ended due to budget cuts in 2012. He titled his presentation "lessons learned," which included information about selection in a breeding program and success in the field. Thomas primarily bred Labradors at the TSA kennel. He said his best breeding candidates were dogs with working lines whose pedigrees reflected success in hunting and field trials. He discussed the importance of environmental factors and socialization during the raising of the litter and how this could impact the dogs' success rate as a detection dog. He discussed the TSA evaluation criteria for "green" dogs (dogs that have not received formal detection training).
Dr. Eldin Leighton is president of the International Working Dog Breeding Association. He retired from the breeding program at The Seeing Eye and as a research geneticist in the US Army

Super dog project. He presented a 13-page proposal co–authored by Dr. Cindy Otto, Dr. Liz Hare and Scott Thomas. The paper offered a number of guidelines for an independent effort that would bring together the private and public sectors in a working collaboration for the purpose of breeding purpose-bred, well-trained dogs to accomplish a variety of missions needed for the safety and security of the United States. Their paper offered data, recommendations and suggestions aimed at developing a plan that could be implemented in the future based on the knowledge gained from canine behavioral science.

Dr. Cindy Otto, Executive Director of the U. Penn Working Dog Center, began her presentation with an informative video that depicted the on-going work at her center and how it achieves its success with students and the community. Her video showed the training and development methods used with puppies and their progress toward working in a detection field, including cancer and epilepsy detection. Research at the Center focuses on the uniqueness of the canine olfactory system and on tests designed to evaluate detecting unique substances.

Otto expanded why the United States needs a national breeding program with features that include a national semen bank, phenotype screening and studies to evaluate both the successful dogs and those that fail.

Dr. Liz Hare, a quantitative geneticist at the U. Penn Working Dog Center, presented her statistical research and data on phenotypes, genotypes, pedigrees, heritability and estimated breeding values (EBV). Her talk included issues related to breedings using EBV, based on specified criteria, together with accurate pedigree information, and how that could be used to improve the selection for complex traits.

Paul Mundell, executive director Canine Companions for Independence, spoke about Assistance Dogs International's North American Breeding Cooperative and how that has helped schools have a better source for service dogs. The cooperative was formed in 2013 to address problems encountered by small breeding programs. Participating service dog training schools pay an annual fee of $1,500. Potential breeding dogs are donated by participating programs, purchased from outside breeders, or acquired through cooperative deals with nonparticipating programs. The program is made possible because all dog transportation costs are subsidized through in-kind donation from American Airlines.

Paul Bunker is the chief trainer for K2 Solutions, a government vendor based in North Carolina. Bunker and his team from K2 used an outdoor area to demonstrate the abilities of dogs trained to find and detect dangerous substances and follow a person through a crowd that is carrying suspicious substances. He explained how they buy young dogs from breeders and train them to sell to the government or private entities.

Don Roberts is Program Manager for the Detection Canine and Surface Transportation Explosive Threat Detection Program for US Department of Homeland Security Advanced Research. He discussed on-going research targeted at improving the operational proficiency of canine detection teams. His presentation included methods that test and evaluate protocols used in homemade explosives, support for state and local law enforcement agencies, and ways to improve operational effectiveness.

A panel discussion made up of Dr. Carmen Battaglia, Dr. Cindy Otto, Dr. Paul Waggoner of Auburn University, Scott Thomas, and Paul Bunker completed the day and addressed topics that centered on a national center for excellence, research measures, data collection, semen storage and usage, breeding protocols, costs and the pricing of puppies in the program. Dr. Battaglia summarized the proceedings with a brief overview of the conference and challenged the audience to review the discussions, recommendations and suggestions.

Mr. PALMER. The chair recognizes Lieutenant Smith for his testimony.

STATEMENT OF LIEUTENANT SCOTT R. SMITH

Mr. SMITH. Thank you, Chairman Palmer.

And I would also like to thank the members of the subcommittees for inviting me here today, and specifically Ranking Member Demings. The connection is not lost on me, why I am sitting here in front of you.

My name is Scott Smith. I'm a lieutenant with the Orlando Police Department. I have been in law enforcement for 25 years, all of which have been done in Orlando, Florida.

Throughout the years, I have had an opportunity to hold a variety of jobs within our agency. But by far, the most rewarding and the most challenging has been supervising the canine unit. I would like to take the next couple of minutes to explain to you our uses of canine in Orlando and also explain a couple of unique security concerns in the central Florida region and how we address those with the canines.

The Orlando Police Department utilizes 14 full-service canines in their day-to-day operations. These full-service canines are primarily used to support patrol personnel in search and apprehension of criminals. They are trained and tested in disciplines such as area searches, building searches, tracking, and apprehension. In addition to the above functions, each of these canines also possess a secondary specialty and are trained in either narcotics detection or explosive detection.

Over the years, as the paradigm has shifted from a war on drugs to a war on terror, so too is our focus on secondary specialties. In the early years of our program, almost all of our canines were trained on narcotics detection. Now, in the aftermath of such events as the 1993 World Trade Center bombing, the Manchester Arena bombing, Brussels Airport, and the coordinated terrorist attacks in Paris, France, that used numerous suicide vests, the Orlando Police Department Canine Unit concentrates heavily on the explosive detection specialty.

In addition to the 14 full-service canines that I mentioned above, the Orlando Police Department also utilizes four single-purpose explosive detection dogs. These four canines are only trained on explosive odor and were specifically purchased to bolster the security measures at Orlando International Airport. They maintain a visible presence throughout the airport and actively sweep passengers in common landside areas, such as ticketing, baggage claim, and the food and retail areas.

As has been demonstrated in past terror events, whether it's ISIS or a lone extremist, mass transit facilities such as an international airport are a favorite target. It can shut down an entire transit system as well as ensure a large amount of casualties.

Due to the unique tourism industry of central Florida, Orlando International Airport has continued to grow and has set daily passenger records throughout 2017. In addition, the Orlando International Airport is currently in phase 1 of a brandnew international terminal scheduled to open in 2020. With the expansion of the airport and the increased passenger numbers it will bring,

the demand for security screenings will only increase. Local and Federal agencies will be forced to grow in order to support these security demands. By utilizing canine assets, agencies can offset manpower demands and screen a wide number of people faster.

In addition to our international airport, central Florida is home to several of the top tourist destinations in the world. For the past 3 years, the central Florida region has surpassed its tourist numbers from 62 million in 2014 to 68 million in 2016. On a daily basis, local law enforcement canine teams are patrolling theme parks such as Walt Disney World, Universal Studios, and Sea World. And at times, a particular theme park can register as many as a quarter of a million guests in their parks at one time.

Due to these numbers, some of these theme parks even supplement the law enforcement explosive detection teams with their own supply of explosive detection canines. And although these personnel are not sworn law enforcement, it enables the theme parks to show a greater presence and screen a greater number of visitors at their turnstiles.

On top of the concentration of theme parks in central Florida, Orlando is also a host to a number of collegiate and professional athletic events. Our explosive detection dogs sweep 41 home games for the Orlando Magic, 19 home games for Orlando City Soccer, 12 for Orlando Pride, plus 3 NCAA Bowl games. Orlando is also currently the host city for the NFL Pro Bowl.

Attendance at these games can range from 5,000 to 70,000. Numbers like those seen at theme parks and sporting events are often too tempting to ignore for an extremist or an individual. The visible presence and active screening of canine teams at choke points at these venues is an invaluable deterrence to the safety of the visitors.

Lastly, as everyone knows, on June 12, 2016, Orlando fell victim to the largest terrorist attack on U.S. soil since 9/11. A self-radicalized extremist murdered 49 victims at a small nightclub just outside downtown Orlando.

The terrorists boldly made claims of possessing suicide vests as well as having a car bomb parked outside. Several canine teams from different agencies across central Florida responded to that event. The suspect's car was swept, as well as key areas around night—around the nightclub, such as command posts, staging areas, and—sorry—excuse me—and staging areas. Ultimately, his claims of explosives proved to be false. But the use of responding canine teams helped alleviate the concerns of first responders about secondary devices and allowed them to concentrate on the terrorist himself.

In conclusion, I would like to emphasize the ever-changing tactics used by extremist groups who frequently seek out soft targets with large number of victims. The threat to these targets can be greatly mitigated by the use of explosive detection canines. The simple site of a canine vehicle or a canine team patrolling the choke point can deter even the most dedicated terrorist if they believe they will be detected before they can cause the greatest amount of damage. Those who seek to harm us need to know we will use the best assets available to prevent their attacks and preserve life.

Again, I would like to thank the committee for the opportunity to speak in front of you, and I look forward to answering any questions.

[Prepared statement of Mr. Smith follows:]

CITY OF ORLANDO

POLICE DEPARTMENT

Statement of Scott R. Smith

Lieutenant

Orlando Police Department

Before the

U.S. House of Representatives

Subcommittee on Intergovernmental Affairs

&

Subcommittee on Transportation and Protective Security

Concerning

"Innovations in Security: Examining the Use of Canines"

Tuesday, October 3, 2017

2154 Rayburn House Office Building

Good afternoon. I would like to thank the Subcommittees for the invitation to testify before you today. My name is Scott Smith, and I am a Lieutenant with the Orlando Police Department in Orlando, Florida. I have been in law enforcement for the past twenty five years. Throughout my career I have had the opportunity to hold a variety of jobs within the department, but by far the most rewarding was supervising the canine unit in our agency. I would like to take the next couple of minutes to explain the makeup of our unit and discuss the unique security concerns in the Central Florida Region which benefit from the use of these canines.

The Orlando Police Department utilizes fourteen full service canines in our day to day operations. These full service canines are primarily used to support patrol personnel in the search and apprehension of criminals. They are trained and tested in disciplines such as area searches, building searches, tracking and apprehension. In addition to the above functions, each of these canines also possess a secondary specialty and are trained in either narcotics detection or explosive detection. Over the years, as the paradigm has shifted from a war on drugs, to a war on terror, so too has the focus of our police working canines. In the early years of our canine program, almost all of our canines were trained for narcotics detection. Now, in the aftermath of such events as the '93 World Trade Center bombing, Manchester Arena bombing, the Brussels Airport bombing and the coordinated terrorist attacks in Paris, France that used numerous suicide vests, the Orlando Police canine unit concentrates heavily on the explosive detection specialty. In addition to the fourteen full service canines above, the Orlando Police Department also utilizes four single purpose explosive detection canines. These four canines are only trained on explosive odor and were specifically purchased to bolster the security measures at Orlando International Airport. They maintain a visible presence throughout the airport and actively sweep passengers in common landside areas, such as ticketing, baggage claim and food and retail.

As has been demonstrated by past terror events, whether it is ISIS, the Taliban or a sole extremist taking credit, mass transit facilities such as an international airport are a favorite target. It can shut down an entire transit system as well as ensure a large amount of casualties. Due to the unique tourism industry of Central Florida, the Orlando International Airport has continued to grow and has set daily passenger records throughout 2017. In addition, the Orlando International Airport is currently in Phase 1 of a brand new International Terminal scheduled to open in 2020. With the expansion of the airport, and the increased passenger numbers it will bring, the demand for security screenings will only increase. Local and Federal agencies will be forced to grow in order to support these security demands. By utilizing canine assets, agencies can offset manpower demands and screen a

wider number of people, faster.

In addition to our international airport, Central Florida is home to several of the top tourist destinations in the world. For the past three years, the Central Florida Region has surpassed its tourist numbers, from 62 million in 2014 to 68 million in 2016. On a daily basis, local law enforcement canine teams are patrolling theme parks such as Walt Disney World, Universal Studios and Sea World. At times, one theme park in particular can generate at least a quarter of a million guests in their parks in a single day. Due to these numbers, some of these theme parks even supplement the law enforcement canine teams with their own supply of explosive detection canines. Although these personnel are not sworn law enforcement, it enables the theme parks to show a greater presence and screen a greater number of visitors at their turnstiles. On top of the concentration of theme parks in Central Florida, Orlando is host to a number of colligate and professional athletic events. Our explosive detection canines sweep 41 home games for the Orlando Magic, 19 home games for Orlando City Soccer, 12 home games for Orlando Pride as well as three NCAA bowl games. Orlando is also the current host city for the NFL Pro Bowl. Attendance at these games can range from five thousand to seventy thousand. Numbers like those seen at theme parks and sporting events are often too tempting to ignore for an extremist group or individual. The visible presence and active screening of canine teams at choke points at these venues is an invaluable deterrence to the safety of the visitors.

Our canine teams are also frequently involved with the security of Presidential candidates. Florida has generally been a hotly contested state in recent elections. Due to this, candidates from both parties make frequent visits to the State of Florida, to include the Central Florida Region. During the last election, the Orlando Police Department conducted explosive sweeps for no fewer than 25 campaign visits. These sweeps can range from simple arrival and departure areas to more complicated motorcade and site security sweeps, depending on a candidate's itinerary.

Lastly, as everyone knows, on June 12, 2016 Orlando fell victim to the largest terrorist attack on U.S soil since 9/11. A self radicalized extremist murdered 49 victims at a small nightclub just outside downtown Orlando. The terrorist boldly made claims of possessing suicide vests as well as having a car bomb parked outside. Several canine teams from different agencies across Central Florida responded to the scene to assist. The suspect's car was swept as well as key areas around the nightclub, such as command posts and staging areas. Ultimately, his claims of explosives proved to be false, but the use of these responding canine teams helped alleviate the concerns of on scene first responders about secondary devices and allowed them to concentrate on the terrorist himself.

In conclusion, I would like to emphasis the ever changing tactics used by extremist groups who frequently seek out "soft" targets with large numbers of victims. The threat to these targets can greatly be mitigated by the use of explosive detection canines. The simple sight of a "K9" vehicle, or a canine team patrolling a choke point, can deter even the most dedicated terrorist if they believe they will be detected before they can cause the greatest amount of damage. Those that seek to harm us need to know we will use the best assets available to prevent their attacks and preserve life.

I would like to thank the Committee for taking the time to listen to my opening remarks and look forward to answering any questions you may have.

Mr. PALMER. I thank for the gentleman for his testimony.
The chair recognizes Dr. Otto for her testimony.

STATEMENT OF CYNTHIA M. OTTO, DVM, PH.D.

Dr. OTTO. Chairman Palmer, Ranking Member Demings, Chairman Katko, Ranking Member Watson Coleman, and members of the subcommittees, thank you for the opportunity to testify today.

The Penn Vet Working Dog Center is the Nation's premiere research and educational facility dedicated to harnessing the unique strengths of our canine partners and producing an elite group of scent detection dogs for public health and safety.

The Working Dog Center is a living laboratory where we study and test strategies to optimize canine health and performance from 8 weeks of age through career entry. Early training provides a positive learning environment and mitigates problems. This, combined with placing dogs in their chosen careers, ranging from explosive detection to cancer detection, has resulted in 93 percent of our dogs graduating into detection careers.

Dogs are a force multiplier. Dogs are diverse in their skills. And applications in which dogs support national security directly and indirectly are constantly expanding. The most obvious direct applications are the explosive detection canine and the law enforcement canine. Many of the other jobs, such as narcotics detection, agriculture, search and rescue, human remains detection, and even conservation dogs indirectly support national security. The demand for working dogs in other fields is also great.

Dogs that could serve in national security careers may instead be sold to organizations or individuals that utilize dogs for other detection roles, hunting, or sport. Overall, there is a great and increasing demand for dogs with the health, behaviors, and skills necessary for a wide array of working careers, and currently, there is no comprehensive plan to increase the supply of these invaluable canines or conduct the research to enhance their success.

With a high demand for dogs, one of the challenges faced is the affordable procurement of healthy dogs capable of performing the tasks required. In seeking a solution, we must consider the cost of the dogs and the source of the dogs.

There are several components that contribute to the cost of a dog. The first is in identifying dogs for potential purchase. The purchase price of both successful dogs and those that eventually fail must also be tracked. Once a dog is acquired, the expensive training, medical care, housing, transportation, and working lifespan of the dog should be included. Finally, one of the biggest factors in the cost of the working dog is the cost of the human partner.

In summary, the initial price of the dog is a small fraction of the total cost of employing a detection canine. Wise choices on the health and training of the dogs and selection of the handler can help to reduce the lifetime costs of dogs.

The main options for sourcing dogs are imports, domestic breeders, shelter dogs, or a dedicated breeding program. Traditionally, the majority of dogs for the U.S. military and domestic law enforcement agencies have been imported. Challenges with imports stem from a lack of control over genetics, health, environment, and availability. The current challenge with relying on domestic breeders is

production of top hunting dogs is typically their primary goal, thus cost and selection criteria often don't align with government needs.

A shelter model is emotionally appealing but limited by cost and availability of appropriate dogs, making it unsuitable as a primary source of dogs.

A dedicated breeding program would allow for control of genetics, environment, and training, and potentially meet the demands for dogs in a variety of careers. Development of a breeding cooperative would allow breeders and organizations to sell dogs that meet the health, behavioral, and genetic requirements. For this program to be effective, additional and ongoing research will be necessary.

In conclusion, to improve the availability and success of working dogs, supporting our national security in an efficient and cost-effective manner, sound scientific principles must be applied to all aspects of dog selection, training, and deployment. To achieve the full potential, a federally hosted collaboration between academic institutions, government agencies, organizations, breeders, and industry to create a national detection dog center of excellence is critical. The center of excellence would research, validate, and disseminate best practices to advance the scientific approach to dog selection, care, and training.

Furthermore, to address the impending crisis of detection dog availability, a new cooperative model of detection dog breeding, early training, and distribution must be critically evaluated. Included in the documents is a white paper describing a cooperative breeding program that we presented at the AKC summit last March.

We thank you for the opportunity to present and welcome your questions and comments.

[Prepared statement of Dr. Otto follows:]

Penn Vet
Working Dog Center

The Committee on Homeland Security, Subcommittee on Transportation and Protective Security and the Committee on Oversight and Government Reform, Subcommittee on Intergovernmental Affairs joint hearing:

"Innovations in Security: Examining the Use of Canines."

Testimony by Cynthia M. Otto, DVM, PhD Executive Director Penn Vet Working Dog Center

Oct 3, 2017

Chairman Palmer, Chairman Katko, and members of the committee, thank you for the opportunity to testify regarding "Innovations in Security: Examining the Use of Canines." on behalf of the Penn Vet Working Center at the University of Pennsylvania.

Background on PVWDC

The Penn Vet Working Dog Center is the nation's premier research and educational facility dedicated to harnessing the unique strengths of our canine partners and producing an elite group of scent detection dogs for public safety and health. The Penn Vet Working Dog Center was developed based on my experience caring for and subsequently monitoring the health of the search and rescue dogs that responded to the 9/11 terrorist attacks. The Penn Vet Working Dog Center opened on September 11, 2012 as the legacy of the dogs that served at 9/11. As pioneers in the working dog field, our goal is to increase collaborative research and the application of the newest scientific findings and veterinary expertise to optimize the availability and performance of lifesaving detection dogs. The Working Dog Center is a living laboratory, where we study and test strategies to optimize canine health and performance. In our program, we start with puppies at 8 weeks of age. These dogs have either been donated to us by breeders who meet our health and performance standards or they have been the result of our breeding program. Our breeding program was started through a cooperative research agreement with DHS in which we were able to obtain the remaining female Labradors from the TSA breeding program that was closed in 2013. This enabled us to continue to work with the genetic stock and build on the progress that had been achieved in the 10 years of the TSA breeding program. Our program is unique in that the puppies come to school every day. They live with foster families on evenings and weekends to help develop the social skills that they will need in careers with canine handlers. During their days of training, we introduce foundation skills, including search, fitness, obedience, and environmental exposure. The puppies are evaluated, data is collected and progress is recorded. We consider their basic schooling to be like a liberal arts degree. As part of our program we then determine the career that each dog is best suited for based on their physical and behavioral attributes. We recognize that each dog is an individual and just like freshmen entering college will gravitate toward a major in which they can be successful, we apply this approach to our dogs. We firmly believe that it is the early training providing a positive learning environment and mitigating any problems before they become entrenched, combined with placing dogs in their

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chosen careers ranging from law enforcement patrol to explosive detection to search and rescue to cancer detection that has allowed us to have 42/45 of the dogs completing our program to graduate into detection careers. These careers include 20 Law Enforcement canines (single - explosives or narcotics, or dual purpose – patrol) working at the Federal, state, county and local levels, 6 FEMA Urban Search and Rescue dogs and 4 state or local search and rescue dogs, 2 bed bug detection dogs, 2 private explosive detection dogs, 1 private narcotics detection dog, 1 accelerant detection dogs, 3 diabetes alert dogs and 3 cancer detection dogs. Our 5 years of experience and data collection have led us to several insights that we believe have value in optimizing the use and procurement of detection dogs. Several of these concepts, including the need for a National Center of Excellence for Detection Dogs and a National Breeding Program were also shared in the Senate Homeland Security Committee Hearing on March 3, 2016 (dogs of DHS: How the canine programs contribute to homeland security (S-Hrg. 114-673). The whitepaper describing a proposal for a National Breeding Cooperative was delivered at the US Detection Dog Conference hosted by the American Kennel Club on Mar 1, 2017. A copy of this document is included in the materials for this hearing.

This hearing aims to address three main areas: **Use of Dogs for National Security, Procurement of Dogs and Issues with Supply of Dogs.**

Based on our research across a wide array of relevant topics and our experiences with numerous national, regional, and local canine agencies, industry and academic partners as well as our own program, I will address some of the highlights within these three areas.

Use of Dogs for National Security

Dogs have been well recognized as a force multiplier. Gen. David H. Petraeus, the commanding general of Multi-National Force, Iraq, said, "The capability that military working dogs bring to the fight cannot be replicated by man or machine. By all measures of performance, their yield outperforms any asset we have in our inventory. Our Army would be remiss if we failed to invest more in this incredibly valuable resource." (Feb. 8, 2008)
https://www.army.mil/article/56965/military_working_dogs_guardians_of_the_night

Dogs are highly efficient in their ability to locate odor and communicate that information. In addition, the presence of a dog at the airport or the train station is a recognized deterrent. In disasters, like the hurricanes and earthquakes of the past month, none of the modern drones or technology can match the efficiency of a trained search and rescue dog in locating victims. Dogs are diverse in their skills and the applications in which dogs support National Security are constantly expanding.

Dogs both direct and indirectly support national security. The most obvious direct application is the explosive detection canine (EDC). There are several different roles for these dogs based on the search environment. Traditional EDCs have been trained to screen stationary objects,

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packages and vehicles. The military has expanded search capacity to involve improvised explosive devise (IED) detection dogs which work often at a distance from the handler screening roads, hazards and buildings for evidence of IEDs. Passenger screening canines can be used to screen humans as they move through a fixed point or along a specific path or as patented by Auburn University, the "vapor wake" or person-borne dogs will follow a moving person carrying explosives through a crowd. Law enforcement applications of tracking and criminal apprehension are also vital canine roles in local and national security applications.

Many of the other jobs currently performed by detection dogs indirectly support National Security. Narcotics detection dogs are critical in stemming the drug trade. The USDA Beagle Brigade serves by preventing the introduction of threats to agriculture. In response to manmade or natural disasters, search and rescue dogs are vital for saving lives. Human remains detection dogs have a role in criminal investigation and disaster response. Wildlife conservation dogs are invaluable in the battle against smuggling of ivory and other illegal wildlife products. The Penn Vet Working Dog Center is launching a new study to determine if dogs can play a role in combating the illegal antiquities trade that often supports drug or arms trade.

There is also a huge demand for working dogs in other fields. Dogs that could serve in National Security careers may instead be sold to commercial organizations that utilize dogs for bed bug detection or other detection roles or might be sold as hunting or sport dogs. Another competing interest for working dogs is the growing area of medical detection, service and assistance dogs. On the flip side, assistance dog breeding programs often have dogs that are too high energy for assistance work and those dogs may become available for explosive detection or other careers that could support National Security. This potential synergy highlights the need to look broadly at sources of dogs.

Overall there is a great and increasing demand for dogs with the health, behaviors and skills necessary for a wide array working careers and currently there is no comprehensive plan to increase the supply of these invaluable canines or the research to enhance their success.

While dogs are our most effective means, it is important to remember that they are not perfect. Their performance is reliant on appropriate training, good health, teamwork with a handler, and ongoing training. While these are not topics for this hearing, they must be considered in the overall plan to maximize the effectiveness of dogs in National Security. I serve on The National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees subcommittee, Dogs and Sensors, which is working to create National Standards for the care, utilization, training and certification of detection dogs across a wide variety of disciplines based on scientific evidence. There is clearly a need to support the development of rigorous scientific data to develop and validate these standards.

Procurement of Dogs

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With the high demand for dogs, one of the challenges faced is how to affordably procure the number of healthy, high quality dogs capable of performing the tasks required. This raises two important points, the first is related to the cost or affordability of dogs and the second is the source of dogs.

When considering the affordability of a detection dog it is important to define the costs. There are several components of the cost of a dog that may be overlooked by simply considering the amount of money paid to purchase a dog. To evaluate the accurate cost of a dog, all of the costs or cost savings should be considered over the career of that dog. If we are to follow the funds from the beginning to the end of a career we can more accurately evaluate the value and true cost of the dog. The first cost even prior to purchasing a dog is the cost of actually identifying potential dogs for purchase. The purchase of dogs from Eastern Europe typically involves travel of staff to evaluate a dog, for dogs purchased from vendors or breeders in the US the cost (personnel, time) of screening the dogs needs to be considered. Once a dog has been selected based on the screening methodology, the purchase price is a clear expense; however, not all dogs that are screened are deemed acceptable to enter or complete a training program; therefore, the cost of time and investment in dogs that eventually fail must also be tracked. The next expense is the training of the dog, if a dog requires a shorter training period before being paired with a handler, that represents a cost savings and conversely if the dog requires remedial training that increases the cost. Medical care is also a cost that must be considered. Dogs with good structure and sound health will represent a cost savings. Dogs with injuries or medical conditions will represent an additional expense resulting from the cost of treatment, lost days of work/training or these dogs may be discharged from the program representing a total loss. The expected working lifespan of the dog should also be considered. Depending on the intensity of the work a dog may be actively employed for 5-8 years. If a dog can enter the workforce at 18 months rather than 24 months of age and remain healthy to work until it is 10 rather than 9, the value of that dog is increased and the overall cost decreased. One of the biggest factors in the cost of the working dog is the cost of the human partner. The time spent training the handler initially is often up to 400 hours for a single purpose detection dog, and twice that time for a dual-purpose dog. In addition, the SWDDOG guidelines (https://swgdog.fiu.edu/) have put forth that dogs should have 16 hours a month of ongoing training and NIST is maintaining these recommendations. Canine handlers also require specially outfitted vehicles that should be included in the cost calculation. Finally, the cost of space/housing for the dog should be considered. At the Penn Vet Working Dog Center we are advocates of dogs living with their handlers, but even this incurs an expense. If dogs are kept in a kennel facility, then the infrastructure, utilities, kennel personnel and disease control expenses must be included.

In summary, the initial price of the dog is a small fraction of the total cost of employing a detection canine. Wise choices on the health and training of the dog and selection of the handler can help to reduce the lifetime cost of dogs.

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Source of dogs

The main options for sourcing dogs are imports, domestic breeders, a dedicated breeding program or shelter dogs.

Traditionally, the majority of dogs for the US military and domestic law enforcement agencies have been imported from Eastern Europe. With increased demand on Eastern European resources, Mexico and South America are expanding their breeding of working dogs. One of the main reasons cited for the reliance on imports is the ready availability of affordable working type Shepherds. Despite the fact that the US is the number one producer of Labrador Retrievers, many of the working Labradors are also imported. Challenges faced when relying on importation of dogs from foreign sources stem from a lack of control over factors that could impact the success and availability of these dogs. The availability of imported dogs can be impacted by political instability, disease (e.g Chagas disease in Mexico), or competing demands from countries willing to pay more. The genetics of the imported dogs is rarely documented and therefore systematic improvement in genetics in completely out of the control of the end user. Without knowledge of the genetics, inbreeding and disease propagation risks increase; whereas in a controlled breeding program selective breeding can be utilized to decrease the incidence of crippling diseases like hip dysplasia. One of the common reasons for dogs to fail is lack of environmental stability (e.g. ability to walk on slippery floors, metal stairs, loud noises). Early exposure to new and unusual environments is critical to build the confidence of the dogs, but, this is out of the control of the purchaser for imported dogs. Finally, the world-wide demand for working dogs has put pressure on the supply resulting in lower quality dogs, limited availability and increased price.

Although many Labradors are currently imported, domestic Breeders of predominantly sporting dogs (e.g. Labradors, German Shorthair Pointers etc) do provide many of the dogs currently working as single purpose detection dogs. The greatest challenge is that the goal of these breeders is to produce high end hunting dogs which command top dollar. They are more likely to sell their best dogs to private hunters or sports competitors for a higher price than they could get from the government. One agency that relies on these sources has commented that they are screening hundreds of dogs in order to identify the ones that are appropriate to enter training in explosive detection. This difficulty in obtaining the dogs suggests that dedicated breeding programs that specifically select for the desired traits of explosive detection and other types of working dogs are warranted. Another challenge with purchasing dogs from breeders is that dogs enter training between 12 and 18 months and unless the breeder is training the dogs as gun dogs, the expense of raising the dogs until they are purchased can be prohibitive.

A dedicated Breeding Program would allow for careful selection of the genetic traits that are most desired for the different types of careers. The government experience with breeding programs has not enjoyed the same success as private service dog organizations (e.g. The Seeing Eye, Guiding Eyes), but even with the successful models there is room for improvement. A

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single source breeding program is a risk due to disease and environmental hazards. A new concept would be to form a breeding cooperative (see the details in the Appendix) in which many breeders or organizations participate to sell dogs that meet the health, behavior, and genetic requirements. As with the private breeder model, more research is necessary to optimize the selection process. However, if the experience at the Penn Vet Working Dog Center can be replicated (early training and allowing the dogs to be sold to different agencies for diverse careers), the successful placement of the dogs is likely to be high; thereby reducing the cost per dog and the challenge of disposition of dogs that do not meet the criteria. At the Penn Vet Working Dog Center we are exploring models of cost effective early training involving prisons or community programs (e.g. community colleges). For this program to be effective, additional and ongoing research will be necessary.

Finally, many citizens are keen to address the dog overpopulation problem while supporting National Security. This is a valiant effort and may provide some dogs to support the mission as evidenced by some of the shelter based dogs that are currently working. The challenge with this approach is that the health and behavior of these dogs is frequently unknown or unacceptable. Some organizations that focus on shelter dogs have been reported to screen up to 1000 dogs to find 1 suitable candidate. The expense of this approach makes it unsuitable for a primary source of dogs.

Unfortunately, we do not have time to address the Screening and Training of Dogs that would further contribute to the success. But hope that these topics will be the focus of future hearings.

Issues with Supply of Dogs

It is currently impossible to determine the total number of working dogs in this country. Estimates have ranged from 10,000 to 40,000. What is clear is that there is a need to replace dogs as they retire and the demand for dogs for new programs is increasing. Many of the key issues with dogs obtained based on the source of procurement have been defined above. A critical factor in expanding the capacity of dogs serving National Security is that any increase in demand is unlikely to be filled quickly. Because there is not a readily available surplus of dogs, to increase production of dogs, the lead time is approximately two years. This lag time is based on the time required to breed and raise these dogs for the type of work. If dogs can enter the workforce earlier and work effectively longer, then the overall demand for replacements will decrease. Another unknown factor is the future applications that will further increase the demand for dogs that meet the criteria for detection work.

Conclusions

In conclusion, thank you for this opportunity to present the research and experience of the Penn Vet Working Dog Center, and the vision that we see for a viable solution to improve the availability and success of working dogs supporting our national security. We firmly believe that

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the application of sound scientific principles to all aspects of dog selection, training and deployment will enhance National Security in an efficient and cost effective manner. To achieve the full potential, a federally hosted collaboration between academic institutions, government agencies, organizations, breeders and industry to create a National Detection Dog Center of Excellence is critical. This Center of Excellence would research, validate and disseminate best practices to advance the scientific approach to dog selection, care and training. Furthermore, to address the impending crisis of detection dog availability, a new and cooperative model of detection dog breeding, early training and distribution must be critically evaluated. We look forward to continuing our collaborations and research in support of this vital mission and welcome your questions and comments.

Respectfully submitted,

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PVWDC Contact and Staff and Collaborator Acknowledgements

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Mr. PALMER. I thank the witnesses for their testimony.

The chair now recognizes the gentleman from New York, Mr. Katko, for 5 minutes.

Mr. KATKO. Thank you, Mr. Chairman.

Ms. Goffe, when I was—when you were speaking, you reminded me of one of my early jobs as a young teenager working at AKC events in the central New York area. I was excited to go work with dogs until I got there and found out what the job was. Wearing a white coat and a large shovel and a big bucket, you can guess what I had to do all day every day. But it was—it's an early exposure to AKC and the professionalism of the organization. And I am impressed with that.

Dr. Otto, your testimony was excellent, and it was very helpful, because we do need a blueprint. And I think we all agree that increasing the use of canines in law enforcement and antiterror efforts is preferable over fancy new machines that rarely work as advertised. And they are more pliable, more able to adapt, and cost-effective as well. So I don't think there is an argument about that.

The question is, why aren't we getting there? And you both touched on it. But I think one of the big things that I'm concerned with is some of the bottlenecks and some of the inconsistencies and some of the sheer incompetence in the procurement process. We see that again and again in Homeland Security and other areas. But a procurement process with respect to the dogs provides a disincentive for breeders to get into this field. So we got to fix that. And I'd like to hear from you about that. And then if there's anything you'd like to drill down on with respect to your testimony, Dr. Otto, I'd like to hear that.

So, Ms. Goffe, if you want to expound on the procurement process for me, first, that'd be helpful.

Ms. GOFFE. Absolutely. Thank you.

To start with, for the procurement process, we have been looking at the opportunity to acquaint and bring many of the breeders in our network into this process. One of the issues that we've had is severalfold. One, we have many, many small breeders throughout the country who provide the types of dogs that would potentially be ideal for this process. But they don't breed a lot of dogs. They do breed high-quality dogs. So they don't necessarily have the resources. They can be intimidated in some cases by the government contracting process.

As you know, the government contracting process has historically looked for large quantities of dogs. And one of the ways that we think we can help address this problem is to make some changes in the processing—or the contract process—program so that small breeders potentially working together can actually provide dogs that are needed—the type of dogs that are needed.

Another comment that we heard was from some vendors around the country who had mentioned that, in order to scale up, to develop the types of dogs with the health protocols, you know, the scientific background, looking at the genetics of the dog, looking at the pedigrees of the dog, making sure that these dogs were healthy physically and mentally able to stand up to the rigors of day on, day off in various types of conditions out there sniffing for explosives, that they needed a larger facility, a strong breeding program.

Unfortunately, what they found was that small business set-asides got in the way of their ability to do that. When they expanded to a certain level to have the expertise that they needed to scale up, if you will, they were no longer a small business.

That has also brought forward the question of when you consider that detection canines are a critical national security resource, should they potentially be identified under a different NAICS code? Currently, they are identified as live animals, which would be the same as any other animal in acquisition processes. But these animals are different. They are a key part of national security so that the people who are providing them very well may need to have a different level of category for what—costs to the small business.

Mr. KATKO. Ms. Goffe, just to follow up, and then, Dr. Otto, I think I'll have to ask for your response in writing, if you would, because I'm going to run out of time if it is not covered later in the hearing.

Just a question for you, Ms. Goffe, to follow up what you were saying. Do you find that different agencies have different standards, and does that contribute to the problem?

Ms. GOFFE. We have—yeah. We have interviewed a number of people, and we have found that there have been—has been a lot of inconsistency, actually within and across agencies. There has been some frustration among people who would like to provide dogs that they have bred, provided the dogs, gone down, in many cases, to Lackland or somewhere where the dogs would be evaluated. And they have not had a consistent testing experience. The concerns have involved complaints that the protocols used were not realistic to the needs of what that dog would actually be expected to do on a day-to-day basis. We have also heard that they were rejected without a full explanation. And part of the concern—we understand—you know, not all dogs are going to make it. These are very, very specialized dogs. But we think to advance the knowledge and the learning and our ability to really have good detection dogs, we're going to want to have feedback from the Federal agencies so we can work together, make sure that our breeders know exactly what it is that is required in what is considered to be an untrained dog. So we're not talking about high-level security, high-level training. We're talking about basic training for these dogs, just socialization, environmental stability, the mental and physical capabilities to do what they need to do on a daily basis. And we are hearing that the evaluations have been inconsistent.

It is true that some of this is subjective. You've heard the old comment that, if you have three trainers in a room, two of them will agree that the other one is doing something wrong. But from the perspective of science and national security, we think that part of what a center for excellence can do is to establish standards that are a baseline to every dog, every green dog should be able to accomplish to make it to that first level of being accepted into a training program, and then you can carry on with additional training.

Mr. KATKO. Thank you, Ms. Goffe.

I have many other questions, but my time has expired. So I yield back.

And thank you, Mr. Chairman.

Mr. PALMER. I thank the gentleman for his questions.

The chair now recognizes the ranking member, the gentlelady from Florida, Mrs. Demings, for 5 minutes.

Mrs. DEMINGS. Thank you so much, Mr. Chairman.

And, again, to our witnesses, thank you all for being here.

Lieutenant Smith, it's good to see you again, and I will start with you.

Could you please again for us just talk about the critical role that canines play in the safety of the traveling public? And then if you would also talk a bit about where the Orlando Police Department procures its canines and if you've seen any difference between U.S.—dogs from the U.S. versus dogs from other places, like Europe.

Mr. SMITH. Yes, ma'am.

As far as our use in Orlando, like I had just—in my opening statement, the Orlando International Airport, we just procured those four single-purpose dogs. So that's a new program from us, and that—I know there's a trademark here somewhere, but it's—Vapor Wake terminology is what those dogs were. So that's new training, new technique.

The other 14 dogs that I talked about, they are used throughout the city in different venues to include those arenas or sporting complexes. And in downtown Orlando, you obviously know the Dr. Phillips Center, Performing Arts Center, a lot of the vigils that we have or the large, you know, runs or Lake Eola-type thing, Fourth of July celebrations, anywhere that's going to draw thousands of people, we will use those dogs in a pre-sweep. And I think that's important. People walk by—it's same as Jax over here. Everybody walks in, and they recognize the canine. They see it right away. I think they see, you know, the uniform if it says "canine" on there. And I addressed it earlier about a vehicle—when you park a vehicle in front of some place, like an airport terminal or something like that, and it has "canine" in red, that's a deterrent. You know, whether or not that canine is right there, as somebody drives up and they see that, they're going to think twice, whether it's is a pre-surveillance thing, an intelligence-gathering thing. You know, unfortunately, it will only displace it. It may not prevent it entirely. But when they see it, they may pick something else besides the large-scale mass-casualty place.

The other part of your question was?

Mrs. DEMINGS. Procurement.

Mr. SMITH. Procurement.

For our full-service dogs, we go through third-party vendors. They're kind of—once you find a good one, you want to keep your hands on them. We have gone through a few vendors over the years that I have been there. And I'm sure yourself—you'll get a couple of good dogs. And then, after that, the quality kind of deteriorates. You know, the quantity is definitely there. The dogs are there. But it is the quality.

When the use of military working dogs and police working dogs really took off, we saw a decline in the age of the dogs that we were getting, as a local agency. I think a lot of them were being used in the military, and those vendors chose to sell to them first. And then some of the dogs that we got were—instead of being 2, 2–1/

2, they started to be a year and a half old or maybe just a little older. And you start to get too young, and then you run the risk of actually breaking the dog. You know, the socialization and the hard work and stuff, they won't respond to the discipline that you put on them. So——

Mrs. DEMINGS. Okay. Thank you.

Dr. Otto, first of all, I want to thank you so much for the work that you're doing through your nonprofit. Would you agree that many Federal agencies use highly trained dogs for a variety of missions?

Dr. OTTO. Yes, absolutely. I think that's one of the things that we need to consider is that we're not just selecting for one type of dog. So there may be different criteria for different agencies because they have different missions. And one of the really important things about a national center of excellence is that we can consider the phenotype type, which is that external expression of the behavior, and associate that with the genotype, which is the genetic underpinnings, and we can start to actually select dogs for the jobs that we need them to be in. And if we have a litter of puppies, we know they're not all going to be identical. And so there may be some dogs that do wonderful passenger screening and others that do person-borne explosives and some that might actually just need to go to another agency that is looking for support dogs for veterans with PTSD.

Mrs. DEMINGS. Do you know if agencies have developed test standards for their canine units that vary according to the mission?

Dr. OTTO. I don't know specifically. I know that one of our big missions is to actually collect the data because people don't quantitatively evaluate those characteristics. A lot of people will take a test that another organization has used, whether it's relevant or not. And one of our big research questions is, what's the appropriate test, what's the screening that best predicts success in the field that those dogs will end up working in?

Mrs. DEMINGS. Thank you so much.

And, Mr. Chairman, I yield back.

Mr. PALMER. I thank the gentlelady.

The chair now recognizes the gentleman from Kansas, Mr. Estes, for 5 minutes.

Mr. ESTES. Thank you, Mr. Chair.

My first question is for Dr. Otto. You know one of the things we talked about is the acceptance rate of U.S.-bred dogs is much lower than some of the dogs procured from overseas, particularly Europe.

What are some of the best practices that we could put in place to help improve that acceptance rate?

Dr. OTTO. First, I think we have to define the acceptance rate. I think a lot of people are screening dogs looking for specific things. And we're not breeding those dogs or preparing those dogs for jobs in the government. So I think that's the first place that we need to go. And I think that if we're starting to look at what the jobs are and, again, looking at those expectations, that phenotype, we can really impact the dogs early on.

In our program, we start training our dogs at 8 weeks of age. And as a result of that, we're able to mitigate a lot of problems that are things that are keeping dogs from being successful, like envi-

ronmental sensitivity. So, from the time our dogs are 8 weeks, they're going on linoleum floors; they're climbing metal stairs. They're used to these environments. They're able to actually enter the workforce at 12 to 18 months.

We're also using positive reinforcement training. So that is a really important factor in allowing these dogs, when they are young, to be successful in these pretty intense careers. As long as they're loving what they're doing, it really is something that they are thriving at.

Mr. ESTES. Thank you.

Ms. Goffe, you—we talked about the government procurement process, and that was one of the questions you were asked. You know, are there improvements that we can use in identifying our standards that we need to acquire to and from? And what are some things that we could do in that regards?

Ms. GOFFE. Yes, I think there are some improvements. And I would also just like to say, I think one of the areas that we can improve is that, when we're currently obtaining dogs from overseas, we're getting them at 12 months of age. And to Dr. Otto's point and to several other points, when we get them at 12 months of age, they then go into a training program almost immediately. One of the things that we find to be interesting is that, you know, most breeders already let their dogs go at about 12 weeks. So there's this long period of time that, for the dogs that we're, you know, obtaining overseas, we don't know what's happening in that period of time. It's one of the challenges that we face.

But, potentially, by getting more and working more to breed more dogs in the United States, we're going to have a better oversight of what's happening in that period of time. And that means better training, better socialization, to your other question, also potentially increasing the success rate, because it's not what you're picking up at 12 months like what you're picking up overseas. We're getting a dog that has—what we see is what we get at 12 months but, rather, one that we can actually prepare for a much longer period of time to bringing—you know, to bringing that into the system.

Mr. ESTES. Okay. Thank you.

Mr. Chairman, I yield back the balance of my time.

Mr. PALMER. I thank the gentleman.

The chair now recognizes the—our ranking member, Mrs. Watson Coleman, from New Jersey for 5 minutes.

Mrs. WATSON COLEMAN. Thank you, Mr. Chairman.

A breeder typically—I want to talk about a breeder in this country. A breeder typically holds on to the dog and then will allow the dog be purchased at what age? Is it 8 weeks, 12 weeks?

Ms. GOFFE. Yes. Typically—and, of course, it varies. But most breeders who are going to let a dog go let it go at about 8 to 12 weeks of age, getting it to its new home to start socialization and training at that point.

Mrs. WATSON COLEMAN. Thank you.

So, Lieutenant Smith, if the breeder is letting the dog become available between 8 and 12 weeks, do you purchase the dog at that age and then engage in a year's worth of training? What happens in between—what happens before—between the time that the

breeder has a dog that's eligible to be purchased and you, the end user, actually gets it?

Mr. SMITH. We may have to answer this jointly. But, from our end, the breeders—and, unfortunately, we do typically get ours from Europe through a third-party vendor. So the breeder is obviously in Europe. They're raising it from a puppy up until probably about a year is when the vendor from, you know, the State of Florida is typically taking a trip to Europe. The dog is going to be about a year old. Vendors have certain tests that they will conduct with the breeders over there, whether or not they want to purchase it. You know, unfortunately, some of the third-party vendors are like used car salesmen. You know, they want to bring in as many dogs as they can and get rid of them as fast as they can. And some of their testing programs, you know, they'll bring in dogs that don't meet standards for local law enforcement.

So then we'll go through the vender, and we run our own series of tests to see if it's a dog that we would want to employ

Mrs. WATSON COLEMAN. And then do your dogs get recertified— they get certified in a particular detection or whatever, and then do they get recertified? If so, how often?

Mr. SMITH. Correct. So full purchase dogs, those 14 that I talked about—and, you know, they have a larger job. So that is standardized by the Florida Department of Law Enforcement. And that's 480 hours of training. And that covers all those areas that I talked about, building searches, area searches, tracking, apprehension. Any odor work after that, narcotics or explosives, is another 160.

So, you know, manpowerwise, Dr. Otto touched on the cost for the handler themselves being in training that long. You know, it's probably about 4 to 5 months before—once we get the dog and that handler is on the street with that team.

Mrs. WATSON COLEMAN. So, Ms. Goffe, tell me this. What needs to be done so that a breeder would hold on—a breeder interested in having the dog purchased for security purposes, what would need to be done to make that happen?

Ms. GOFFE. Right. Great question. There are a couple of things that we can do. One of the things we suggest is looking at the incentives currently. What we're dealing with with a lot of the really wonderful hunting field trial dogs that we would normally be looking at, one of the problems is that a breeder can sell them at 12 weeks for a comparable price that the government will pay at 12 months. A breeder will say: Well, you know, I can hold this dog for another year, feed it, you know, train it, medical care, et cetera, and maybe the government will want it. Or I can sell it to this great home down the street that's going to pay the same price.

So, unfortunately, we have a rather—a disincentive for breeders to be selling to the government. Having said that, AKC has reached out, and we do know people are interested in doing this.

One of the things that we think is a critical need—and this goes to your point earlier, what do we do in that year? What happens with the foreign dogs? We don't know what happens with the foreign dogs in that period from 12 weeks to 1 year. But with the U.S. dogs, there are several programs out there that have developed relationships with prisons. So you have some prison socialization and

training. We have found those to be very, very successful. Dr. Otto's program has been——

Mrs. WATSON COLEMAN. I was going to ask Dr. Otto about a response to this question as well.

Ms. GOFFE. Uh-huh.

Mrs. WATSON COLEMAN. If you don't mind.

Dr. OTTO. I was dying to tell you.

Mrs. WATSON COLEMAN. I can tell.

Dr. OTTO. Please ask me. Please ask me.

At the beginning, that was really our big challenge. We figured we could get breeders to breed and then sell puppies at 8 to 12 weeks. We knew we had people who wanted dogs at a year to 18 months. And so our big challenge was, what happens in that time period?

And the Penn Vet Working Dog Center has really been an experiment in what we can do. We found that it is so valuable to be able to have those dogs. And our dogs come every day to school and are trained and then go home and live with foster families. And so those dogs are able to be tweaked and adjusted and remedial efforts and everything, which is why we think they're so successful. But it's also very labor intensive.

And one of our goals is to look at what the cost-effectiveness of, maybe, a prison program, but also maybe a partial prison program. Because we know the dogs in the prison programs don't get the environmental exposure that sometimes we need. So some sort of melding of that. There may be kennel programs. There may be a lot of things that we have to research and ask the question: What's the most effective? What is the most cost-effective and also trainingwise? But, I think, what we've missed out in so many of these programs is this early childhood development and our ability to really influence the dogs and set them up for success.

Mrs. WATSON COLEMAN. Thank you. Thank you.

My time is up. I yield back.

Mr. PALMER. I thank the gentlewoman.

The chair now recognizes my colleague from Alabama, Congressman Rogers, for 5 minutes.

Mr. ROGERS. Thank you, Chairman Palmer. And I want to thank you and Chairman Katko for calling this very important hearing. This is a subject that needs a lot more discussion and prominence with the public because I don't think the public understands how scarce this resource is and how critically important it is to our national security.

Lieutenant Smith, I didn't hear you say where you procured the 14 canines from. Where are they sourced from?

Mr. SMITH. Typically, we have found several third-party vendors throughout the State of Florida. We're currently using one in Miami, Florida, right now. We have a Local one in New Smyrna Beach. And then we've also used one in the panhandle near Tallahassee. But, again, all those vendors take their trips overseas, pick out their dogs, and bring them back.

Mr. ROGERS. So they're procuring them from overseas as well?

Mr. SMITH. Correct.

Mr. ROGERS. Dr. Otto, one of the things that I have been advocating for in recent years is that we put more emphasis on domes-

tic breeding with the understanding that this would be a subsidized venture by the Federal Government with us getting first choice of the product. Why do you think that hasn't happened as we have pushed for this? Why do you think that the universities and the marketplace have not formed a consortium to develop this breeding capacity domestically?

Dr. OTTO. I think it's a great question. And I think that timing is a lot, and the fact that a lot of the agencies weren't talking to each other, and breeders weren't talking. And this whole meeting that the AKC hosted was such a great revelation of getting all of the people in the same room so that we could have this discussion and come to the realization that we all need to work together. And I think having a center of excellence to kind of coordinate it—because, to be successful, we're going to need a breeding co-op. And a breeding co-op means that we don't have a centralized breeding source, but we have a mechanism to bring all these individuals in together to study it, collect data, look at the different programs of how to raise the dogs from that 8 weeks to the 12 months. And then, I call it Working Dog Finder, which is like Puppy Finder, where you actually have the organizations come in and say, "I need a dog that does this, this, and this," and the consortium, the co-op, has dogs that then they can match up so that we can actually funnel things.

I think one of our challenges has been that we've been very narrow. It's like: I only want to work with explosive detection dogs. Well, we know that not every dog is going to be successful in that realm. So we want to make sure that we bring in everybody.

Mr. ROGERS. Well, the way I envision this—and I see the Vapor Wake explosive detection canines as the top tier, the Cadillac of explosive detection. And then you've got the passenger screening canines underneath that. But, in my experience—and I've been doing this a long time, dealing with this topic—that, even if a dog is not capable of those two careers, they can always drop down and be used on the border for drug detection and gun detection because the Customs and Border Protection are getting dogs from the local pound for that. So I don't see that there would be any waste in a breeding program that we constructed. But what I hear repeatedly is, well, the reason why it hasn't happened by the private sector is the business case doesn't close. Well, I just think that's because we haven't developed the state-of-the-art dog that we can produce in this country, which brings me to my question.

My understanding is that there really isn't a collection of information about these different breeders, the lines that they've developed, to—that's being centralized for researchers like you to study. Is that accurate? Or am I wrong?

Dr. OTTO. That is accurate. We are certainly working. And, again, we're looking at even the genetics. But until we can have that quantitative phenotype—so, in other words, we can tell specifically numerically what those traits are that we're looking for—it's really hard to look at the genetics and say we should breed this dog to this dog. The International Working Dog Breeding Association has come up with an incredible program where people can put in that information and learn what they call estimated breeding value

so we can make good selection based on those criteria. And that's what's going to move things forward.

We know the TSA breeding program made incredible genetic advances over the 10 years that they were there, and that is the kind of thing that we need to be doing. But we need to be collecting the science. We need to have those markers, and we need to know what the genetics is.

Mr. ROGERS. Mr. Chairman, my time has expired.

If you don't mind, I'd like to ask unanimous consent that I submit my remaining questions to be provided to the witnesses for them to answer for the record.

Mr. PALMER. We are going to have a second round——

Mr. ROGERS. Good.

Mr. PALMER. —if you would like to ask those questions, you may do so, or we'll put them in the record.

Mr. ROGERS. I'll wait for the second round. I can ask questions longer than they'll put up with me.

Mr. PALMER. With that, I will now recognize myself for 5 minutes. And there will be a second round of questions.

Ms. Goffe, one of the issues that prevents increased utilization of domestically bred dogs is the age at which agencies are able to accept them. For many breeders, that doesn't make sense, to hold onto a dog past 8 or 12 weeks when they are typically sent to their new homes for training, particularly for—training for detection or passenger screening. Can you discuss what, if any, steps the American Kennel Club is taking to try to bridge that gap?

Ms. GOFFE. Several. A couple of the things that we have looked at, in addition to the aforementioned prison programs, working with some of the universities who are doing the ongoing training, doing a great job of that, is really working with our breeders to convince them to sign on to a program where the dogs that they are producing will be developed for this purpose. And so they are taking a longer term look at the puppy, particularly if the people who have, you know, a lot of family members who can help out with the socialization. You know, dog breeding is very much, in many parts of the country, still very much a family operation, so really holding onto them longer. And then what we envision is making sure that they have all of the knowledge, the science, the research they need to make those dogs as strong as possible.

And part of that is by letting the government know, developing some kind of relationship, where, because you are able to provide a more stable—a dog with a lot more training time behind it, you're going to have a greater success, we hope, with getting into the government program. So it's not that disincentive of I should sell the dog at 12 weeks rather than waiting for 12 months. That's one of the options.

Also, our kennel clubs may provide additional options.

And then, finally, we do have a lot of dedicated backers—ex-breeders, who have aged out of breeding, but they are still very, very engaged with the dogs. These also present wonderful people to hold on to a puppy, to be, you know, puppy foster parents, if you will, for a year or so and really train them, socialize them, and to give back.

Mr. PALMER. You said something earlier about a business model and that we don't have a business model for that. Without going into a long, long answer, I would be interested to know what that business model would look like. And it seems, in listening to your answer then, that that's one of the gaps that we have in getting the dogs that need to be trained for the kind of work that Lieutenant Smith does, that TSA needs done, or our armed services. Do you—is there a business model that you guys have come up with?

Ms. GOFFE. We think a lot of it is about financial incentive, as well, frankly, the ability to do this, and to make a living at doing this. And one of the concerns that we've had where the dogs have been procured overseas is, while the government says that those dogs are cheaper, one of the things that has not been fully investigated is, are they, in fact, cheaper, and is the government able or paying what we should be paying for these highly valuable resources? It may be a case that the going rate for these dogs should be higher, particularly when you consider and you compare what we would be paying at 12 weeks for a puppy versus 12 months and compare what we're paying to sustain overseas buying trips and all the additional costs that go along with foreign purchase versus domestic purchase. So we are actually very supportive of some language of Mr. Rogers and the Defense Authorization Act that investigates the differences in the costs and tries to set a more realistic cost for purchasing puppies at a later date where they're ready to go.

Mr. PALMER. I'm glad we're going to do a second round because I want to continue to ask you, along this line, and I've got questions for Lieutenant Smith and Dr. Otto. And unlike some chairmen, I won't take 10 minutes for 5. So I'm not calling any names.

But if we had a different model where we kept these dogs longer so that they're an appropriate age for this type training, and they didn't measure up, would those animals still be—and, Dr. Otto, you can answer this—would those animals still be appropriate for a family to adopt or even be sold? Because most of these dogs are purebred, aren't they? That you could still have a market for that so that you create a business model where, if the dog doesn't pan out for service with Lieutenant Smith, the dog would still be a viable product that someone else might be interested in?

Dr. OTTO. I can tell you that the list of people who want dogs that don't make it in our program is really long. And because we've had very few dogs that don't make it, we can't even accommodate that. So there are definitely people who are interested. But, also, using the model where we can have the dogs if they're not successful in this program, could they be successful in another? So, again, defining that phenotype for each and every one of these programs that's using dogs, we can have dogs successful in a whole array of different careers, and then those that aren't successful are going to be very attractive to people who maybe want to compete in sport or just really want a pet. Although, a lot of these dogs are pretty high energy. So they're not your average pet. But they still are very appealing.

Mr. PALMER. My point is not necessarily as a pet, but are they marketable? Because what you have here is an overhead cost, and a business is trying to reduce its overhead. So, if it's got a primary

product that has a high spoilage rate, for instance, the overhead is higher. But if there's a market for these dogs—and as Congressman Rogers pointed out—and we make this, from a price point worthwhile, it seems to me that there is a business model that could be developed that would make this work.

We will now begin the second round of questions.

I will recognize the gentleman from New York, Mr. Katko, for 5 minutes.

Mr. KATKO. Thank you, Mr. Chairman, and I stand ready and willing to take any dogs that might be available because we have plenty of room in our yard.

Anyways, Lieutenant Smith, I want to talk to you a little bit more about some kind of boots-on-the-ground examples of the procurement process and the cost-sharing issues, if any. Are you cost sharing? Are you collaborating with other agencies? So, with that in mind, I want to ask you, do you coordinate with any State, local, or Federal agencies in the procurement process? Or do you simply do it on your own? And, if you do, how is it working?

Mr. SMITH. Sir, we do do it on our own. We call around to those vendors that we've used successfully in the past. And, again, sometimes we run into a shortage problem where they're just out of dogs, and they haven't taken their trip overseas, and their stock, they just don't have it. We'll have to look around a little more.

We do collaborate after the purchase process on training because it's not fiscally wise to run a 4- or 5-month training scenario with one dog and one, you know, cop. So we do call around to—whether it's municipal or county agencies—to see who has new handlers. Basically, that's the problem, is handlers come and go. Every once in a while, you'll lose a dog from age or medical purposes, and then we'll put on joint training classes to certify that team.

Mr. KATKO. All right. So you have heard from Dr. Otto and Ms. Goffe today at length about the procurement processes and some of their suggestions. And it does sound like that is, again, where the problem is, you know, even for you, at the local level, right? Sometimes you can't find a dog. So you've heard some of their suggestions. And I'd ask you to be frank and tell me, what do you think?

Mr. SMITH. I think the business model is going to be a problem. I believe that is the main—I think that's the main problem with people who get into the business model is—I referred to them as used car salesmen earlier. They're not truly in it for the dog, and they're not truly in it for our end purposes. They're in it to make money. And in order to do that, they have to push a large amount of animals through their inventory quickly. And I think that goes to what, maybe, you were talking about, is, how cheap are these dogs? And why are they selling them so cheap in Europe? Because, realistically, if they've held on to them for a year and they've fed them and they've done the vet tests and everything like that, those prices probably should be higher. But, for whatever reason, they're not. And that's why we're getting them from over there, because here, in the States, when you hold a puppy from 8 weeks to 12 months, they have incurred that bill as the breeder. And they have to recoup that from us.

So, you know, whether or not it's the puppy mill terminology and they just don't—they have a disregard for the animal itself, and those that don't make it, who knows what happens to those dogs. You know, some of that probably does happen in Europe, where it's not going to happen here in the States.

Mr. KATKO. So any suggestions on how to address that issue?

Mr. SMITH. Unfortunately, I think that's well above an end-user person like myself.

Mr. KATKO. You provided some pretty good insight, though, and I appreciate it. So——

Mr. SMITH. And thank you for the opportunity. But I really, like—I am stuck on how to solve that problem, because as an end-user, I wish we could get our hands on dogs easier and in that age range of a year and a half to 2 years, because we have had problems with getting them at a month old. You know, there are age determination problems, sometimes, when you get them from Europe. Oh, yeah, he's 16 months old. And come to find out, he's not really 16 months old. You know, he's a year old. And that's a problem. And we've wound up having to return dogs or retire them just because they didn't make it through our training.

And, obviously, the full-service training aspect of it is a little more strenuous than the single-purpose aspect of it. And they go through a lot more, and that's some of the problems that we have.

Mr. KATKO. Okay. Thank you.

I yield back, Mr. Chairman. Thank you.

Mr. PALMER. The chair now recognizes the ranking member, Mrs. Demings, for at least 5 minutes, maybe longer, since I got out of order.

Mrs. DEMINGS. Thank you, Mr. Chairman. I believe I'll take the full 15.

I, again, want to thank our witnesses because this has just been so beneficial for us to hear some of the behind-the-scene processes and some of the challenges that we are facing.

Dr. Otto, I think we'll begin where we left off, and that's involving the test standards. The TSA canine teams, of course, work in areas such as airports where there are a tremendous amount of distractions. And does it make sense to you that the TSA would develop test standards that reflect the unique conditions that their canines operate in?

Dr. OTTO. Absolutely. I think it's appropriate.

Mrs. DEMINGS. Mr. Chairman, I would like to enter into the record a letter from the TSA.

Mr. PALMER. Without objection.

Mrs. DEMINGS. Thank you so much.

And I'd like to share a quote from them that says: Canines displaying a minimum amount of reward, drive, and search behavior may be acceptable for a canine slated to work single-suspect vehicle or occasional VIP motorcades, but it would be unsuitable when the expectation is screening passengers at an airport checkpoint where the use of canines acceptable to screening persons is still relatively new to explosive detection canines.

Dr. Otto, do you agree that more canine teams—or believe that more canine teams are needed at the State and local levels as their

responsibilities continue to grow? We've heard Lieutenant Smith share a little bit about the additional use of canines.

Dr. OTTO. I think the demands are, you know, skyrocketing, and it certainly makes me feel more comfortable when I get back on Amtrak to know that there are canines at Union Station.

Mrs. DEMINGS. Are you aware of domestic vendors that are actually working on training canines to meet TSA standards? Are you aware of any vendors that are actually working with the TSA to develop standards for their canine teams?

Dr. OTTO. As far as developing standards, I am not aware. I do know that there are several vendors that are working with TSA, particularly on the Person-Borne Explosives Detection Dog.

Mrs. DEMINGS. Thank you.

Can anyone share, what is the average cost of acquiring a canine and training it, whether single-purpose use or multipurpose? What's the average cost?

Mr. SMITH. I can tell you that we pay anywhere from $9,000 to $13,000 per dog, and that is before the man-hours are adjusted into, in the State of Florida, 480 hours for a full-service dog.

Mrs. DEMINGS. —$9,000 to $13,000?

Mr. SMITH. Correct. And that's based on how much training it has in it already. Vendors sell some dogs that are considered to be titled, and they have more training once we get them.

Mrs. DEMINGS. Ms. Goffe, any?

Ms. GOFFE. I would say that we've heard a wide range of numbers based also on the training. But that's along the lines that we've heard.

Mrs. DEMINGS. Okay. Thank you.

Mr. Chairman, I yield back.

Mr. PALMER. The chair recognizes the gentleman from Alabama, Mr. Rogers, for 5 minutes.

Mr. ROGERS. Thank you, Mr. Chairman.

Dr. Otto, you want to talk a little bit about people working together. You made reference to, a little while ago, about the collaboration, the sense of it, essentially. Ten years ago, roughly—I'm also a member of the Armed Services Committee, in addition to Homeland Security—I wanted to try to get the canine community, breeding community, and training community, to agree on working together to develop a standard of physical capability but also training that the government could rely on for purchasing, whether it's for the military or for Homeland Security. It was impossible to get these folks to work together and agree. Everybody felt their way of training was superior to everybody else. Do you sense that has dissipated in any way or changed? Because you talk about this center of excellence and this sense of cooperation. I worry that we're going to see that devolve again.

Dr. OTTO. I think it's a risk. But I do think there is a change. I think that all of the organizations are realizing that they no longer can get the dogs that they want. And so they're all feeling this pressure, and they realize they need to cooperate. And the fact that we had all of the representatives at the AKC meeting and we all agreed on kind of the general direction was really exciting. And I think you laid a lot of the groundwork by setting the seeds for

that. And I think the timing and the cost and the struggle that people are having is really forcing them to have to work together.

Mr. ROGERS. I want to get to, I think, the point Mrs. Demings was getting at, on the price that folks like you are having to pay. And the government is paying higher than that in some situations for the top-notch canines. And I have Auburn in my district. And Auburn's success rate on dogs that can make it as Vapor Wake, which, again, is standard, is about 60 to 70 percent of the dogs that they produce in their breeding program.

It's my belief if through organization and research that we can get that production and success rate to 80, 85 percent, then that business case is going to close so that they can sell that 80 or 85 percent at the $15,000 or $20,000 level. And then the passenger screening dogs would come in at 10,000 or 12,000. And then the dogs that can't do that, they could maybe be great for single-detection searches or cadaver searches or drug dogs or whatever, could be then sold for whatever the market would bear to get the waste out so the business model closes. That's what I'm after in trying to get a breeding program stood up and supported by the Federal Government.

Ms. Goffe, DHS has struggled with procurement and writing capability requirements for years. What do you think the DHS can do to make more clear what their expectations are when it comes to American canine companies and the product that they're wanting to have processed through their screening programs?

Ms. GOFFE. Well, first, I'd like to say that it's a tough challenge. There's a lot of subjectivity when it comes to training.

Having said that, one of the things that we've had discussions with DHS and vendors is that we need to have specific sort of standards for the baseline of these types of dogs. So that's to say that, when you bring one of these dogs in—we're talking about untrained dogs or what they've defined as untrained dogs. Some of those dogs are going to go on to do additional training and to go to, essentially, higher levels like the Vapor Wake level. But if we can develop a single standard of what a dog who's going to be a detection dog should be able to achieve, whether, you know, again, it's environmental, mental, physical, all the various types of health, and then the standards for training spell out——

Mr. ROGERS. So are those requirements not written with enough specificity now? Is that your argument?

Ms. GOFFE. I'm sorry?

Mr. ROGERS. Are those requirements not written with enough specificity?

Ms. GOFFE. The requirements are very vague right now.

Mr. ROGERS. What about after action, when somebody goes through the training facility and their dog is not successful, or the screening facility, are you given clear feedback? Are you hearing that they're giving clear feedback about what the shortcomings were?

Ms. GOFFE. We have, unfortunately, heard they have not been getting clear feedback. We have heard a lot of frustration from people who have spent a lot of time providing what they thought the government wanted based on a scope of work and then have heard that, well, this scope of work can range from anything along a set

of guidelines to, well, it is subjective. So, if we can nail down a clear, concise, scope of work, what do these dogs need to do so that they can be better prepared, we think we'll have a better response from breeders and vendors.

Mr. ROGERS. Great. My time has expired.

Mr. Chairman, thank you. Again, I'd like to offer my final questions for Dr. Otto for the record. And, with that, I yield the balance of my time.

Mr. PALMER. Without objection, so ordered.

Mr. PALMER. The chair now recognizes the gentleman Louisiana, Mr. Higgins, for 5 minutes.

Mr. HIGGINS. Thank you, Mr. Chairman.

Ladies, sir, thank you for being here today.

Lieutenant Smith, I was a police officer for 14 years, SWAT operator for 12, been on hundreds of missions with canine guys. And you're a special breed, and no pun intended. So thank you for your service.

And I'd like to ask you: You know, this is a Nation that's $20 trillion in debt. And, of course, we have to find the most efficient and wise expenditure of the people's Treasury. That's one of the reasons that some of us are pushing heavily for the increased use of canine teams because some of the alternatives of technology are very, very expensive. And we talk about the expense of a given dog right now being up to 25 grand for a canine; we'll cover that in a second.

But let me just ask, Lieutenant Smith, in your career, do you know of any known technology that can duplicate the performance and versatility of a good canine team?

Mr. SMITH. Not even close.

Mr. HIGGINS. Thank you very much.

So let's talk about the expense of the dogs. When you have a broad-spectrum detection certification level for a dog, explosives, narcotics, cadaver detection, human sport tracking, each one of these certification levels, would that not add to the value of a dog if that dog is already certified in that detection technique?

Mr. SMITH. Yes, sir, it would.

Mr. HIGGINS. Thank you. So you can either buy the dog that's already certified with these various broad-spectrum skills, or, if you intended for the dog to have that skill, you'd have to send that dog and his trainer to that school, would you not?

Mr. SMITH. You would.

Mr. HIGGINS. Which would increase the expense of the dog, if you make that comparison. I think that's very reasonable, don't you?

Mr. SMITH. Yes.

Mr. HIGGINS. Okay. So the other expense of a canine dog, is it not the bloodline of the dog? Isn't that considered——

Mr. SMITH. Is that for me?

Mr. HIGGINS. Isn't there sort of a culture amongst canine cops— and I wish my brother was still here—to have a dog with a deep bloodline?

Mr. SMITH. Yes.

Mr. HIGGINS. Yes.

Ms. Goffe, don't you agree? Let me not put words in your mouth, ma'am. I would suggest that dogs bred and raised here in the

United States, although the bloodline might not run as deep and appear as pure and pedigreed, they'd still be quite capable of performing as a canine dog. Would you agree with that?

Ms. GOFFE. Absolutely.

Mr. HIGGINS. Thank you.

So if we can shift this culture of, LT, from amongst our brothers and sisters that are canine operators, from having a dog with a deep bloodline to an AKC registered and trained dog, wouldn't you believe that would be an efficient expenditure of the people's Treasury and a very effective choice?

Mr. SMITH. Yes, sir, it would.

Mr. HIGGINS. Okay. Let's jump to officer retention and how that impacts. I will question you specifically, Lieutenant, is when you— what impact does canine reassignment to a new handler—if you lose an officer to another department or he transfers to another section within your own department and you have to reassign that canine, what generally happens with that dog?

Mr. SMITH. So, if you're keeping the same dog and the dog is fully trained, they still have to go through the same amount of training in Florida that I talked about, the 480 hours. They still have to do that 480. It's a little more turnkey for the cop because the dog already knows what he's doing, and it's just a matter of time to get the officer up. But they still have to put those hours in. So that team is off the road and away from those assignments for that 480 hours.

Mr. HIGGINS. So they can't perform because they're being repaired?

Mr. SMITH. Correct.

Mr. HIGGINS. Right. And has it been your experience, sir, that sometimes the dogs that cost you less money when you first got them end up to be better performers than the dogs that cost more money?

Mr. SMITH. In some cases, yes.

Mr. HIGGINS. Yeah.

Mr. Chairman, I would suggest that this has been—thank you for holding this hearing. I think this is exactly the course of action we need to take on this subcommittee. And I, for one, am a loud and vocal advocate for the increased use of canines and their teams.

And I thank the ladies and the gentleman for appearing before us today.

I yield back.

Mr. PALMER. I thank the gentleman.

I recognize myself now for a few minutes of questions, as undefined as that might be.

Lieutenant Smith, one of the reasons we're holding this hearing is because of conversations that I had with Ranking Member Demings and Chairman Katko. And I want to recognize them. As law enforcement professionals, they have been invaluable in educating me about some of these issues.

But the primary concern that I had that I brought up to both of them, and they shared this concern, is the lack of perimeter security at airports. I think all three of us fly every week. And I can't speak for them, but I'm going in and out of airports where it is not

rare to see no security at the dropoff point and then to get inside the airport, in the ticketing area, and not see any security.

Does that concern you?

Mr. SMITH. Yes, absolutely, especially from the history of certain terrorist events.

Mr. PALMER. I would expect that answer.

In talking with Ranking Member Demings about the jurisdictional issues between local law enforcement and TSA and trying to decide how this needs to be layered, whether it should be local law enforcement deploying the canines versus TSA, I think that's yet to be resolved. But I do think the issue is, is that we need more quality dogs. We need a much more visible presence. You made a statement very early on that just the appearance of a dog or a canine unit is a deterrent. And I mentioned airports. I think the same thing is true of surface transportation hubs and major events. The primary focus of this is figuring out, how do we get more dogs approved, and particularly domestic dogs? But how do we get those deployed? What resources do we need to provide to make that happen so that we avoid another catastrophic event like we've just witnessed in Las Vegas?

Mr. SMITH. Well, I think, for the end user, no matter how successful you are with the domestic breeding program, it's going to come down to a budgetary concern for the local agency. You know, whoever is the authority over the international airport or the domestic airport or whatever, it's going to come down to actually being able to pay for those dogs no matter what the price point is. So, whether there's any assistance, you know, from the Federal Government or anything like that, that's going to be the biggest concern because people who raise their hand and want to work with a dog, you don't have a shortage of that. You'll have the officers that want to come out and do that job. It's a matter of actually being able to fund it at our level.

Mr. PALMER. Well, one of the things that we were talking about earlier, and Congressman Rogers brought this up, and I think I brought it up in my questions earlier, is reducing the number of dogs that are rejected. And I think one of the ways you do that, Dr. Otto, is that you have very clear evaluation standards. And can you tell us how, for instance, TSA sets and evaluates standards for passenger screening and explosive detection?

Dr. OTTO. I'm afraid I can't tell you how they do that because I haven't worked directly with them. We use the TSA screening process for our puppies to see if they're able to enter in. But I have actually not worked with the TSA at the level of that training and evaluation.

Mr. PALMER. Well, wouldn't it make sense that if local law enforcement, for instance, they have jurisdiction over local airports, if they're within their city limits or their area of jurisdiction, so there's going to be overlap, wouldn't it make sense that there be set standards across the board so that when you have local law enforcement or other law enforcement interacting with Federal agencies like TSA, you've got the dogs all trained to the same standard? And I realize the handlers will—you know, that changes some things somewhat. But wouldn't that make sense, that everybody is training to the same standards?

Dr. OTTO. Yes, I believe. And I believe that DHS has been doing some testing. And I think one of the things about the standards, too, is, who is evaluating the dogs? It really does need to be an outside group evaluating the dogs as opposed to an internal assessment, and I think that might be where some of our challenge also comes. If we're doing—if we're sort of evaluating ourselves, we're a little softer than maybe we should be.

Mr. PALMER. Is there enough capacity to supply our domestic needs, whether it's TSA or local law enforcement? Is there enough domestic capacity to provide those dogs?

Dr. OTTO. Currently, I don't think that there is. I think that that's why we need to move on to a dedicated breeding program. And I think we need to realize that there's a 2-year lag from the time we start breeding. So, if we want them tomorrow, we needed to be planning this 2 years ago.

Mr. PALMER. And that goes back to the business model that I think we're going to have to develop and the resources that Congressman Rogers mentioned.

Unless there are other members with questions, I thank our witnesses for appearing before us today. I would like to just make this point: Again, this has been a very collaborative effort by both subcommittees. And even though Chairman Katko and Ranking Member Demings and I began talking about these issues months ago, the timeliness of this joint hearing is not lost on the members of these two subcommittees. The horror that we saw taking place in Las Vegas Sunday night loomed large over us as another reminder of the dangers that we all face and the responsibility that we share to ensure the safety and security of all Americans. And to echo what has already been said, we pray for the grieving families that have lost friends and loved ones, and pray for the full recovery of those who are injured.

The hearing record will remain open for 2 weeks for any member to submit a written opening statement or questions for the record.

If there's no further business, without objection, the subcommittees stand adjourned.

[Whereupon, at 3:55 p.m., the subcommittees were adjourned.]

APPENDIX

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Transportation
Security
Administration

SEP 2 9 2017

The Honorable Val Butler Demings
Ranking Member
Committee on Oversight and
Government Reform
Subcommittee on Intergovernmental Affairs
U.S. House of Representatives
Washington, DC 20515

Dear Ranking Member Demings:

Thank you for the opportunity to provide your staff with a briefing on Transportation Security Administration's (TSA) Passenger and Explosive Detection Canine Program. We appreciate the Committee's interest in TSA's procurement process used for our canine training program.

The attachment addresses your specific question, and I hope this information is helpful. If I may be of further assistance, please do not hesitate to contact me personally or the Office of Legislative Affairs at (571) 227-2717.

Sincerely yours,

Clint Fisher
Assistant Administrator
Office of Legislative Affairs

Attachment

Q. Does TSA have US based vendors supplying dogs?

A. Yes, TSA has U.S. based vendors supplying dogs, both from the TSA Blanket Purchase Agreement and the stateside DoD agreement. In fact, under a new DoD initiative TSA has been solely utilizing stateside vendors since August 2017.

Q. In the briefing you mentioned TSA procures dogs from European vendors because of a certain standard, does TSA apply the same standards to US based vendors?

A. For canines sourced through the DoD, the same standards are applied to EU and U.S, vendors. Canines from U.S. vendors under direct TSA procurement are held to an increased environmental stability and social behaviors than those under the DoD statement of work. Environmental stability measures the dogs' ability to operate in an airport environment such as entering elevators, walking on various types of flooring, and navigating other environmental obstacles such as sliding doors. Social behaviors measured in the statement of work are those social traits that make the dogs suitable to work around passengers in the screening checkpoint, including children. These additional standards were developed in an attempt to select canines more likely to be successful in the Passenger Screening capability and reduce training timelines and elimination rates in training. However, in order to procure more canines from domestic vendors, in the new TSA Statement of Work to be contracted in fiscal year 2018, TSA will offer the same DoD standard to stateside vendors in an attempt further increase their availability to provide TSA canines. TSA will then attempt to train the domestic canines to these environmental stability standards and social behavior standards once procured from the domestic vendors.

Q. Does TSA apply the same test standards to European dogs versus US dogs?

A. The only EU canines evaluated are through the DoD, therefore the testing and acceptance requirements are the same under the DoD agreement. As mentioned the current TSA BPA does have additional environmental testing.

Q. What effort has TSA made for American vendors to be educated on TSA's standards for dog procurement?

A. TSA has implemented numerous steps to assist in the success of its US vendors:
- TSA has conducted site visits to vendor locations with procurement specialists to offer suggestions on facilities and training methodologies that would support meeting the standards.
- The TSA has hosted several formal and informal education seminars to educate prime and sub vendor personnel on the requirements contained in the SOW.
- TSA adjusted the contract to allow the vendors the opportunity to view all canine testing.

- TSA started videotaping all TSA BPA canine testing and utilizes those tapes to review specific behaviors that are desired, acceptable or disqualifying with the vendors.
- Allow the vendor to send (1) or (2) of their trainers to the CTC to shadow our trainers to learn more about what type of canine is desired and some of our methodologies
  - Pico sent 2 trainers to CTC 8/3/17
  - iK9 sent 3 trainers to CTC 8/14/17
  - Pico sent 1 Trainer to CTC 8/17/17
  - Pico sent 1 Trainer to CTC 9/15/17
- The CTC also offered to send personnel to the vendor sites for (2) to (3) days to conduct follow up communications after their visits to the CTC.

Q. Could you explain how TSA develops their standards and briefly explain how the standards are different from DoD canine security teams, or federal police force teams?

A. In relation to procurement standards, the CTC utilizes its subject matter experts education and experience to develop a thorough Statement of Work that outlines the testing, behaviors, and characteristics that are predictive of successful working traits that align with CTC requirements. Basic behavioral trait criteria i.e. reward interest, search behavior, and sociability are fairly standard across all detection canines. However, Canine selection is gauged by the ultimate operational use of the prospective K9 candidate. The TSA use of its canines in both passenger and cargo environments requires canines capable of searching for extended time frames during a single search a requirement not required of most DoD and local police canines. As an example, Canines displaying a minimum amount of reward drive and search behavior may be acceptable for a K9 slated to work single suspect vehicle or occasional VIP motorcade but would be unsuitable when the expectation is screening passengers at an airport checkpoint. Although not completely exclusive to TSA, the use of canines acceptable to screen persons is still relatively new to explosives detection canines. This also sets a differentiation between those canines and those used by DoD and most other federal teams.

Question for Ms. Sheila Goffe
Vice President, Government Relations
American Kennel Club

Question from Representative Mike Rogers

October 3, 2017, Hearing: "Innovations in Security: Examining the Use of Canines"

My research suggests that dogs sourced from many European vendors lack any documentation for their breeding practices and that quality standards vary widely between vendors. What tools could American breeders use to bring a more professional approach than their European counterparts?

The AKC believes that there are three major components to assessing and recording canine attributes: genotype (i.e. genetics and epigenetics), phenotype and pedigree. The study of each of these includes key factors that contribute to determining the suitability of a dog for detection work. These factors include "drive", trainability, temperament, scenting (olfactory) ability, health, and so on.
It is not clear whether European vendors have this information or provide relevant documentation. Typically, European vendors are not breeders, but instead middlemen who purchase dogs, transport them to events where dogs are displayed and sell them to governments or private agencies. It is also not clear whether or how information about key predictive factors for success as a detection dog are used in those breeding programs. For the most part, little is known about the background of the individual dogs purchased from Europe. As many European dogs are prepared to meet generic standards for a variety of clients in a high-demand market, there is little incentive for European vendors to provide this information.

"Quality standards" are problematic at several levels. If quality standards are defined generically as the ability of green (untrained) dogs to meet basic requirements for acceptance into government training programs or for trained dogs to consistently succeed in test situations, it's accurate to say that outcomes are variable. It's equally problematic, however, that there is broad disagreement on what those standards for detection dogs are or should be. The requirements or scopes of work provided by various U.S. Government agencies contain vague terminology that leads to confusion, inefficiencies and, in some cases, adversarial relationships between vendors and government purchasers. In regards to the Department of Defense (DOD) Working Dog Program, HR 2810, the House-passed National Defense Authorization Act, addresses part of the clarity and transparency issue by calling for a description and reporting of activities undertaken by the DOD to ensure that its needs and the performance standards by which dogs are selected for the Department are clear, consistent and readily available to dog breeders, vendors and trainers.

Use of cutting edge science in the areas of health and genetics, along with

pedigree information such as the multi-generational health data provided in AKC pedigrees, would enable breeders to thoughtfully and purposefully breed dogs for the combination of qualities that predispose them for success as detection dogs. The study and use of best practices in socialization and training throughout the first year of a dog's life should not be discounted. Careful training and socialization further improves the likelihood for consistent success in detection dog candidates.

The establishment of an independent center of excellence or standards of excellence, made available to all providers of domestically-bred detection dogs, would support a continuum of purposeful decision-making (whelping box to grave) that incorporates the study, advancement and implementation of best practices for: selective breeding based on pedigree, genetics, phenotype, health testing and structural standards; appropriate socialization, care and preparation/training of juvenile animals; long-term outcomes; and other important variables. Consistent, integrated use of this kind of expertise and best practices to develop domestically-bred and -prepared dogs improves the likelihood for positive outcomes. Purchasing dogs from sources for which such information and practices are not available limits the chances for successful outcomes.

For any further questions, contact Sheila Goffe, Vice President, Government Relations, American Kennel Club at 919-816-3720 or Sheila.Goffe@akc.org

PennVet
Working Dog Center

Chairman Gary Palmer
Chairman John Katko
c/o Sharon Ryan Casey
Deputy Chief Clerk
Committee on Oversight and Government Reform
2157 Rayburn Building, Washington, DC 20515
202-593-8219 sharon.casey@mail.house.gov

October 29, 2017

Dear Chairmen Palmer and Katko and ranking members Watson-Coleman and Butler-Demings;

Thank you for allowing me to testify before the Committee on Oversight and Government Reform on October 3, 2017, at the hearing titled "Innovations in Security: Examining the Use of Canines." I have received the additional questions submitted by Representative Mike Rogers.

1) **Dr. Otto, does DHS, particularly TSA, make its training methodology and underlying science public for researchers like you to review?**
I have never requested access to TSA's training methodology or their data. I have read published papers that included TSA handlers in the research cohort. I have been welcomed by CBP while working on a research project with their dogs (recently published https://www.frontiersin.org/articles/10.3389/fvets.2017.00174/full). CBP was very open and receptive to sharing training methodology and ideas to improve the performance of their canines. I have also reviewed the data collected and papers published from the former TSA breeding program through DHS funded research programs.

a. Would requiring DHS to be more transparent about their standards push them toward more evidence-based, peer reviewed work?
More data from the DHS canine programs should be made available with appropriate precautions to prevent restricted data from being shared. I sit on the National Institute of Standards and Technology (NIST) OSAC's subcommittee on Dogs and Sensors (https://www.nist.gov/topics/forensic-science/organization-scientific-area-committees-osac/dogs-and-sensors-subcommittee). Clearly, there is a national need for developing scientifically validated standards for training and assessment of canines. Since not all dogs will be expected to perform the same tasks, in the same environment or with the same behaviors, a challenge is clearly defining the various phenotypes (the physical manifestation of the behavior and structure) for the different disciplines. A universal challenge in generating valid and relevant standards is the current lack of scientific data available. The more data that can be objectively reviewed, the better we will be able to

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formulate appropriate standards for all agencies and evaluate performance of individual dogs and programs. When generating data, however, as recommended by NIST OSAC Dog's and Sensors, it is critical that the certification evaluations are performed by certifying official(s) that are not routinely involved in the day to day training of the canine team being evaluated and double blinded testing is incorporated. A major function of a Canine Center of Excellence would be to serve to coordinate or conduct the necessary studies and act as a clearing house to disseminate information following a standard peer review process.

b. **What tools are available to collect canine health and response data that could feed more objective and consistent canine performance evaluations?**
This is a critical question because, if the quality of data entered for the analysis is poor, or the desired phenotype is undefined, then the information derived from the data will be meaningless. There are several categories of data that have potential value and the data collection tools may be different. The health data would optimally be obtained from an electronic medical record. CBP has developed an electronic database, Canine Tracking System (K9TS). Based on a 2017 document (*https://www.dhs.gov/sites/default/files/.../privacy-pia-cbp047-facts-august2017.pdf*) "Canine Tracking System (K9TS): K9TS, is a web-based Firearms, Armor, and Credentials Tracking System (FACTS) subsystem, which tracks the lifecycle of all CBP canines. The CBP Office of Field Operations (OFO), U.S. Border Patrol (USBP), and the Office of Training and Development (OTD) use K9TS to track the canine procurement, evaluation, training, certification, health/vaccination, and operational activity records". I have not seen this system since 2015, so do not know how it is being implemented, but it has tremendous potential. A national database that could be accessed and utilized by all of the working canines would be priceless in documenting health, behavior and performance. This knowledge would also be invaluable for breeding programs, training programs and economic models. Currently, the International Working Dog Breeding Association has developed a registry to facilitate breeding decisions (https://www.iwdr.org/) and would be available for a National Breeding Cooperative. Some data might be most objectively obtained through video analysis, particularly behavioral assessments and certification tests. Genetic data (DNA, semen) will also be invaluable in disease monitoring and breeding selection. Again, a Canine Center of Excellence could serve to coordinate and steward much of this data.

2. Do you support establishing a Canine Center of Excellence to improve the standard of working dog in the US?

I support establishing a Canine Center of Excellence using the model of the DHS S&T Centers of Excellence (COEs) which "*develop multidisciplinary, customer-driven, homeland security science and technology solutions and help train the next generation of homeland security experts*". The mandate for the COEs came from the Homeland Security Act of 2002: "*The Secretary, acting through the Under Secretary for Science and Technology, shall establish ... a university-based center or centers for homeland*

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security. *The purpose of this center or centers shall be to establish a coordinated, university-based system to enhance the nation's homeland security."* There is not a COE that addresses the vital and diverse roles of the canine in homeland security. Furthermore, there are large knowledge gaps in the science of optimizing canine health and genetics, as well as training and performance of working dogs and their handlers. A Canine Center of Excellence (CCOE) is essential to improve the standard of working dogs in the US. To date most organizations have worked independently and therefore lessons learned and internal research have not been shared broadly. A CCOE would provide leadership, best practices, scientific research, support and training recommendations for detection canine teams. A CCOE would serve to bring diverse organizations together on common goals while still addressing the individual unique requirements of each organization. The CCOE would bring together science and practical implementation, partnering academic institutions with government agencies, industry and other organizations. The CCOE could serve as the oversight and coordinating organization for a National Breeding Cooperative, a clearing house for information and a resource for health, behavior and performance standards for working canines.

Respectfully,

Dr. Cynthia Otto, DVM, PhD, DACVECC, DACVSMR
Executive Director, Penn Vet Working Dog Center
Associate Professor of Critical Care,