Detection Canine Program

Science and Technology

ADVANCING DETECTION CANINE SCIENCE

Canines are a demonstrated effective resource, but there is a need for a centralized focal point within DHS to address mission requirements, conduct operationally relevant research, facilitate knowledge sharing, and act as a repository of expert advice on common problems across government, academia and the private sector.

S&T's Detection Canine Program provides the Homeland Security Enterprise (HSE) with the tools, techniques, and knowledge to better understand, train, and deploy detection canines in their operational environment.
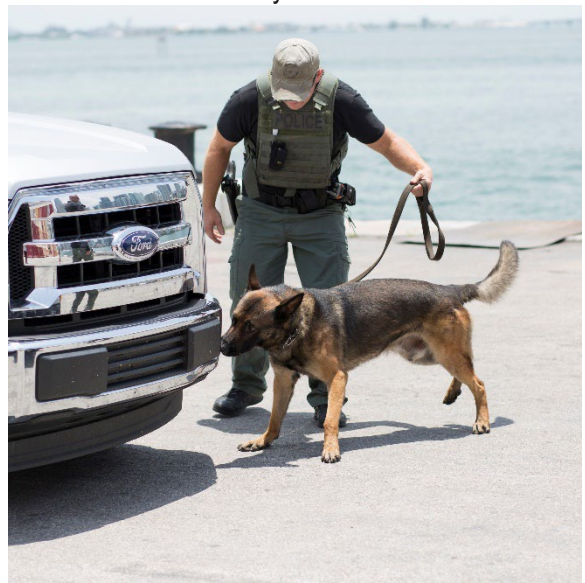
PROGRAM FOCUS AREAS

The program has three specific focus areas:

- Development and testing of canine training aids that can be used to improve and test canine ability to detect threats
- Independent operational test and evaluation capability for detection canines; discovering canine strengths and weaknesses by performing in-field assessments; and using a scientifically rigorous approach with statistically significant results to enhance and validate testing methods
- Canine R&D structure and function with focus on basic understanding of canine olfaction, cognition, genetics, genomics and breeding, and behavior to improve operational efficiencies and training methods

CANINE R&D INITIATIVES

The DHS S&T PBIED Canine Initiative began in 2012 in order to understand the strengths and limits of canines specially trained to detect PBIEDs being carried in by people, either on their person or in bags, in mass transit and large crowd event operational environments. This type of parametric study and testing is critical to scientifically determine the limits of performance.

The Regional Explosives Detection Dog Initiative (REDDI®) was started in 2017 as an outreach effort aimed at advancing the knowledge and capabilities of our nation's detection canine teams. This initiative addresses the need for a centralized focal point within DHS to address mission requirements, conduct operationally relevant research, facilitate knowledge sharing, and act as a repository of expert advice for the detection canine community.

PROGRAM PERFORMERS/PARTNERS

The program works in partnership with several law enforcement agencies in the National Capital area:

- University of Maryland PD
- Maryland State Police
- Pentagon Force Protection Agency
- DHS Office of Chief Security Officer
- Federal Protective Service

Program performers include:

- Auburn University
- Battelle Memorial Institute
- Johns Hopkins University Applied Physics Lab
- MIT Lincoln Laboratory
- Texas Tech University