



**Submitted Testimony of the Pennsylvania Department of Environmental Protection
Senate Health and Human Services Committee
Monday, April 26, 2021**

The Department of Environmental Protection (DEP) receives funding from the Department of Health (DOH) and operates under a Memorandum of Understanding to conduct tick surveillance and testing across the Commonwealth. The funding level has stayed consistent at \$700,000 for the previous and current fiscal years.

The DOH funding supports DEP's Tick Surveillance and Testing Program personnel that include a manager, two aquatic biologists, and a microbiologist. Funds are allocated to the Department's West Nile Virus Program with a portion of that to 38 granted counties that have local mosquito control programs to conduct tick surveillance; the remaining Commonwealth counties are supported by DEP's Vector Management staff. The funding supports operations and is used for field surveillance supplies that are utilized by both county and DEP Vector Management. These supplies include instruments that collect environmental parameters such as elevation, humidity, temperature, and distance while in the field at the time of collection. Other equipment continuously monitors (every 30 seconds) several additional parameters that are used to analyze and draw parallels to tick activity and when to best target different ticks at different life stages. This funding has also allowed for the enhancement of the Vector Management Laboratory with the purchases of additional molecular equipment and supplies to further its ability to test ticks for additional human pathogens including Lyme Disease. Funding has also supported collaborations with academic and federal agencies that have produced two publications in peer reviewed journals documenting the density and distribution of the newly invasive Asian Longhorned tick, as well as, the nation's first known field collected Asian Longhorned tick containing the bacteria that causes Lyme Disease.

The Tick Surveillance and Testing Program has the responsibility to track and record the distribution and density of different tick species that are native to Pennsylvania, namely the Blacklegged tick (*Ixodes scapularis*), and American Dog tick (*Dermacentor variabilis*). Along with those, the program is documenting the establishment and tracking the expansion of a native southern tick species, the Lone Star tick (*Amblyomma americanum*) into the state, as well as, the newly found exotic Asian Longhorned tick (*Haemaphysalis longicornis*).

The surveillance is conducted during two distinct seasons; the spring and summer surveillance where the Blacklegged tick nymphs are targeted and the fall and winter surveillance where the

focus is the adult Blacklegged tick. The Blacklegged tick is implicated with the transmission of Lyme Disease to humans and, therefore, is the primary focus of the program. During the spring and summer surveillance, trained county staff conduct nymphal surveillance biweekly in 38 counties throughout the Commonwealth, while the DEP Tick Surveillance and Testing Program staff survey the remaining 29 counties. During the same time, county and DEP Tick Program staff are targeting other species of ticks in their respective habitats. During the fall and winter survey, 50 adult Blacklegged ticks are collected from all 67 counties by DEP Tick, West Nile Virus, and Black Fly staff.

Once the ticks are collected, they are identified and tested for several pathogens that are important to public health. The nymphal ticks are tested for the causative agents for Lyme Disease (*Borrelia burgdorferi*), Anaplasmosis (*Anaplasma phagocytophilum*), and Babesiosis (*Babesia microti*). The adult ticks are tested for two causative agents for Lyme Disease (*B. burgdorferi* and *Borrelia mayonii*), Tick-borne Relapsing Fever (*Borrelia miyamotoi*), Anaplasmosis, Babesiosis, and Deer Tick Virus (Powassan Virus lineage II). All collection data and testing results are submitted to the Department of Health monthly.