



August 31, 2026

Chairman Rowe and members of the House Republican Policy Committee,

Thank you for the invitation to speak with you about the growing impact of ticks and tick-borne diseases and conditions in Pennsylvania. I appreciate the Committee's attention to this issue and the opportunity to discuss both the burden we face today, and steps Pennsylvania can take to better protect its residents as that burden changes.

I am an Associate Professor of Entomology in Penn State's College of Agricultural Sciences, Team Lead for the Penn State Extension Vector-Borne Disease Team, and Director of the VectorED Network, a Centers for Disease Control and Prevention-funded Vector-Borne Disease Regional Training and Evaluation Center led by Penn State. My research and Extension program focuses on ticks and other arthropods affecting human and animal health, the pathogens and conditions associated with them, and methods to reduce exposure.

Pennsylvania has long been one of the states most affected by tick-borne disease. In 2024, **16,624 Lyme disease cases** were reported in the Commonwealth—about 128 cases per 100,000 residents—and cases occurred in all 67 counties. Pennsylvania also reported **1,071 cases of anaplasmosis**, which has increased rapidly over the past several years and now occurs in nearly every county.

Lyme disease, however, is only the most visible part of the problem. Blacklegged ticks can also transmit the organisms that cause anaplasmosis, babesiosis, and Powassan virus disease. Lone star ticks, once more strongly associated with the southeastern United States, are increasingly encountered in Pennsylvania and are associated with ehrlichiosis and alpha-gal syndrome, sometimes called “red meat allergy.” Gulf Coast ticks, another expanding species, can transmit *Rickettsia parkeri*, which causes spotted fever rickettsiosis. These threats are already present in Pennsylvania.

For some conditions, we do not know the true burden because reporting is not required. **Babesiosis is not a mandatory reportable condition in Pennsylvania**; 224 cases were voluntarily reported in 2023, but those data may substantially underestimate disease. Alpha-gal syndrome is also not reportable. Nationally, CDC identified more than **110,000 suspected cases between 2010 and 2022** and estimates that as many as **450,000 Americans may have been affected**. Without systematic reporting, Pennsylvania cannot reliably determine how many residents are affected, where cases are concentrated, or how quickly these conditions are increasing. Our reporting requirements should evolve with the threats we now face.

The threats themselves are also changing. Land use, wildlife populations, environmental conditions, travel, and animal movement can alter the distribution and abundance of ticks and introduce new species. The Asian longhorned tick illustrates how quickly this can happen.



First recognized as established in the United States in 2017, it has since spread throughout much of the eastern United States, including Pennsylvania. It can transmit *Theileria orientalis* Ikeda, which causes bovine theileriosis and can result in anemia, production losses, abortion, and death in cattle. The disease has now been identified in cattle in at least **15 states, including Pennsylvania**. We cannot predict which tick or pathogen will pose the greatest threat a decade from now, but we can ensure Pennsylvania is prepared to recognize and respond to change.

Pennsylvania already has a strong foundation. Through the Department of Environmental Protection, supported in part by competitive federal funding, sustained tick surveillance occurs across all 67 counties. We have increasingly good information about where ticks and pathogens occur. The challenge now is to translate that knowledge into **prevention**.

Penn State Extension has become an important statewide resource for that work. Through our dedicated Vector-Borne Disease Team, we combine expertise in ticks and mosquitoes with Penn State Extension's statewide reach. In 2025–2026 alone, the team produced **25 research and educational products, delivered 44 webinars and in-person trainings, generated more than 4,100 webinar registrations, and directly engaged more than 2,000 people through public outreach**. One Associated Press feature highlighting our work was picked up by **384 broadcast outlets worldwide**.

Our reach extends beyond Pennsylvania through the CDC-funded VectorED Network. To date, **117 undergraduate and graduate students** have completed our vector-borne disease internship and certificate program, our webinars generated **more than 3,700 registrations in four months**, and we have trained professionals from more than 10 states. The VECTOR Library, our free searchable database of vector-borne disease educational resources from across the country, has received approximately **9,700 visits** since its launch in 2025.

Penn State also provides the research capacity needed to develop better prevention tools. Researchers across the University study tick ecology, hosts, pathogens, surveillance, and approaches to reducing exposure in people and animals. That capacity is expanding through Penn State's **Tick Research and Experiment Facility**, or TREx, the first dedicated university infrastructure in the eastern United States for maintaining tick colonies and conducting controlled studies with ticks and their hosts. This combination of research and Extension allows Penn State to develop approaches, test them, and move effective strategies into practice.

While these efforts have established Penn State Extension as an important statewide resource, **the next step must be to move beyond reach and awareness and determine whether education actually changes behavior**. Much tick education has relied on a knowledge-deficit model: provide information and assume people will take protective action. Following the COVID-19 pandemic, Pennsylvania institutions invested approximately **\$2 million** in Lyme disease awareness and tick-bite prevention, much of it through passive approaches such as billboards, printed materials, and broad messaging. Those efforts increased access to information, but knowing that repellents, treated clothing, and tick checks are recommended



does not mean people use them consistently. Future investments should measure what people actually do, whether those behaviors persist, and whether they reduce exposure.

Penn State Extension is beginning to test that approach through individualized, on-site tick consultations for homeowners. We assess property-level risk and household behavior, provide tailored recommendations, and follow participants to determine what they adopt. The goal is to identify interventions that **change behavior and reduce exposure**, then determine how to deliver them at scale. Doing that well will require sustained investment in behavior-focused Extension programming and evaluation.

Prevention also cannot rest entirely on individuals. Pennsylvanians encounter ticks in parks, trails, campgrounds, recreation areas, and other public spaces. Pennsylvania should evaluate environmentally responsible approaches to reduce exposure in high-use areas, using existing surveillance to identify priority locations and research to determine what works. Delaware has already established a Lyme Disease Intervention Fund to reduce Lyme disease and other tick-borne illnesses on state-owned lands. Pennsylvania has surveillance, public lands, agency expertise, and university research capacity to evaluate a similar approach appropriate for the Commonwealth. There will be no single solution to Pennsylvania's tick-borne disease problem. We need to maintain strong surveillance, better measure emerging diseases and conditions, invest in education that changes protective behavior, and reduce exposure in the places Pennsylvanians use.

Penn State is well positioned to help lead that work. Penn State Extension provides statewide reach; the Vector-Borne Disease Team and VectorED provide dedicated education, workforce development, and evaluation capacity; and Penn State researchers and the TREx Facility provide the scientific infrastructure to develop and test new approaches.

Pennsylvania has invested in understanding where the risk is. The next step must be to invest just as deliberately in reducing it.

Sincerely,

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