



Zika Prevention and Invasive Mosquito Abatement Act of 2017

From 1972 to 2008, the state supported mosquito research funding. This funding was provided as a pass-through to the University of California, which absorbed the funding during the recession. Since then, the state has not had an established and consistently funded mosquito research program. Meanwhile, California has continued to fight known mosquito-borne diseases such as West Nile virus. Recently, mosquito abatement districts started to encounter invasive, non-native mosquitoes, which transmit Zika virus, among other debilitating and life-threatening diseases. In addition to the deadly diseases they transmit, these invasive species do not respond to traditional abatement techniques. The state is now facing increasing and new threats of disease spread by mosquitoes in California. It is imperative that the legislature recognize the risk associated with invasive mosquitoes and support research and surveillance programs that protect public health.

The Mosquito and Vector Control Association of California is proud to sponsor legislation that would increase awareness of invasive mosquito species and provide long-term support for a statewide mosquito and disease prevention surveillance and research program. This bill would:

- Recognize invasive mosquito species as a public health threat the state must address
- Identify the CalSurv Program in statute as the statewide surveillance database to track and predict the emergence of invasive species
- Establish a funding stream through the California Department of Food and Agriculture to support CalSurv as a critically necessary research and surveillance program as well as local applied research on mosquitoes

A POTENTIAL PUBLIC HEALTH CRISIS

To date, the California Department of Public Health has counted over 450 cases of travel-related Zika virus, as well as several human-to-human transmissions. They are also monitoring pregnant women diagnosed with the virus. Much is still unknown about the effects of Zika virus on humans, as well as all of the ways it can be transmitted. In addition to Zika, invasive mosquitoes are also capable of transmitting several emerging diseases such as dengue and chikungunya. The presence of the mosquitoes that can spread disease among humans should be enough to reengage the state's support of this research. Being able to track and predict where these vectors will emerge is critical in protecting the public health. Mosquito control and public health professionals also remain concerned with West Nile virus, which in 2015 infected 783 Californians resulting in 53 deaths. Supporting a comprehensive database will help track and fight these deadly threats.

WARMING TEMPERATURES AND CHANGES TO WATER USE AND SUPPLY CAN INCREASE MOSQUITO ACTIVITY

A 2014 UCLA study that focused on tropical and African climates indicated that higher temperatures and lower precipitation will lead to more West Nile virus infections, and that it will spread to areas that were previously unaffected. West Nile virus is transmitted to humans by mosquitoes, which acquire it by feeding on infected birds. Horses are also susceptible to West Nile virus when they are bitten by mosquitoes. With less water due to the historic drought, birds and mosquitoes increasingly share the same water sources, allowing mosquitoes to contract the virus from the birds more readily. Additionally, stagnant water creates the perfect habitat for mosquitoes to develop. In certain microclimates throughout California, higher temperatures increase mosquito production and virus activity, leading to higher infection rates.

MODELING AND SURVEILLANCE CAN HELP COMBAT THE SPREAD OF DISEASE

The CalSurv database, which is run through the University of California at Davis provides enhanced surveillance tools to track vector hot spots. These same systems can also predict and model where invasive species will emerge. It is time for the state to sustain and enhance the use of data as a means of improving public health. Without state investment, vector control agencies will not be able to protect the public health as effectively. Mosquito control professionals need to be able to proactively manage these invasive species, and the enhanced surveillance and planning offered by using statewide data would be the most effective methods of curtailing invasive species.

The Mosquito and Vector Control Association of California urges your support of this important measure.