Date of Hearing: July 2, 2024

ASSEMBLY COMMITTEE ON HIGHER EDUCATION
Mike Fong, Chair
SB 1252 (Stern) – As Amended June 20, 2024

SENATE VOTE: 37-0

SUBJECT: California Mosquito Surveillance and Research Program.

SUMMARY: Requires the California Mosquito Surveillance and Research Program (Program) to consult with partners at the University of California (UC) and the California State University (CSU) about the most up-to-date research pertaining to mosquito abatement, including sustainable pest management. Specifically, **this bill**:

1) Requires the Program to consult with partners at UC and CSU about the most up-to-date research pertaining to mosquito abatement, including, but not limited to, sustainable pest management.

2) Defines "integrated pest management" as an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment.

3) Defines "sustainable pest management" as a holistic, whole-system approach applicable to agricultural and other managed ecosystems and urban and rural communities that builds on the concept of integrated pest management to include the wider context of the three sustainability pillars: human health and social equity, environmental protection, and economic vitality.

4) Declares that for the Program, biological control includes, but is not limited to, bats as pest suppressors, dragonfly preservation and restoration, and controls that address invasive crayfish species.

EXISTING LAW:

1) Establishes the Mosquito Abatement and Vector Control District Law, which authorizes the establishment of mosquito abatement and vector control districts, as specified (Health and Safety Code (HSC) Section 2000, et seq.).

2) Requires the Department of Public Health (DPH) to maintain a program of vector biology and control, including providing consultation and assistance to local vector control agencies; providing surveillance of vectors and vector-borne diseases; coordinating and conducting emergency vector control; training and certifying government agency vector control technicians; and, disseminating information to the public regarding protection from vectors and vector-borne diseases (HSC Section 116110).

3) Establishes the California Mosquito Surveillance and Research Program administered by UC Davis, to perform all of the following functions:

    a) Maintain an interactive internet website for management and dissemination of data on mosquitoborne virus and surveillance control;

    b) Work in conjunction with local mosquito abatement and vector control districts to conduct research on arbovirus surveillance, transmission of vectorborne diseases, and mosquito ecology and control; and,

    c) Coordinate with the Mosquito and Vector Control Association of California, California Department of Public Health (CDPH), local mosquito abatement and vector control districts, local governments, and other affected stakeholders to share information.

4) Requires the California Mosquito Surveillance and Research Program to perform these functions to the extent the program receives federal or state grants or private donations or grants made for those purposes (HSC Section 2101).

FISCAL EFFECT: According to the Senate Appropriations Committee, pursuant to Senate Rule 28.8, negligible state costs.

COMMENTS: *Double referral*. This measure was heard by and passed out of the Committee on Environmental Safety and Toxic Materials on June 25, 2024 with a 7-0 vote.

Need for the measure. According to the author, "mosquitoes pose significant public health risks, with invasive species of mosquitoes exacerbating the state's issue with the flying pests. As the author of SB 1252, I know the immediate need for this bill to address the escalating threat of mosquito-borne illnesses in California."

The author contends that, "by mandating the California Mosquito Surveillance and Research Program to consult with all University of California and California State University campuses, we ensure access to the latest research on mosquito abatement throughout the entire state. This collaborative approach fosters comprehensive strategies and leverages the expertise of our academic institutions and collaborative research efforts from our states public universities will strengthen the ability and readiness of mosquito vector control districts and public health agencies in their efforts to combat invasive mosquito populations and the disease they bring to vulnerable communities."

Further, the author states that, "SB 1252 empowers our state to stay ahead of emerging challenges, safeguarding public health and promoting effective mosquito control efforts statewide."

California Vectorborne Disease Surveillance System (CalSurv). The CalSurv was formally established in statute by AB 320 (Quirk), Chapter 422, Statutes of 2019. Prior to AB 320, CalSurv functioned without a mandate in law. The CalSurv is a program jointly operated by UC Davis, CDPH, and the California Mosquito and Vector Control Association (which represents more than 50 local mosquito and vector control agencies). While the system primarily focuses on mosquitoes and mosquito-borne viruses, it also supports surveillance for ticks and tick-borne diseases.

The CalSurv provides an online portal through which organizations from across the state are able to provide real-time reporting through surveillance maps of potentially dangerous mosquito risks and share solutions. This portal acts as a statewide database of California-specific vectorborne disease surveillance results and related information which is used to track mosquito migration patterns and rate of infection, and prevent the spread of mosquito borne viruses like Zika and West Nile. More information on CalSurv can be found here: https://calsurv.org/.

Barker Lab at UC Davis. The Barker Lab at UC Davis (Lab), serves as California's central surveillance laboratory for arboviruses, where the Lab tests mosquitoes and deceased birds for arboviruses from local agencies throughout the state. The Lab also maintains the CalSurv Gateway website, data systems, maps, and servers that facilitate reporting and exchange of California's arbovirus surveillance data.

According to the UC, the surveillance, data systems, and relationships with stakeholders are critical for the Lab's research; and the Lab has been an integral part of California's response to the emergence of Zika virus this year.

Public-health priorities continue to shape the Lab's research and service, especially the interests of California stakeholders, including CDPH and local mosquito and vector control agencies throughout the state. Much of the Lab's work aims to answer timely, policy-relevant questions that inform public-health decisions, and the Lab works closely with public-health partners to evaluate California's surveillance program for arboviruses and to develop response guidelines and risk models.

Further, according to the Lab, the spread and establishment of West Nile Virus (WNV) across the U.S. since 1999 highlights the difficulty of containing zoonotic pathogens, and WNV continues to cause human disease in California every year. Mosquito control is the primary method for limiting transmission risk, but better analytic methods are needed for understanding the collective impact of pesticide applications and other control treatments at the population scale.

The Lab is building on its surveillance and pesticide application databases and new statistical approaches, and consistently conducts research to quantify the impacts of current mosquito control practices and to inform future development of adaptive strategies that can reduce reliance on pesticides and better target control.

More information on the Lab can be found here: (https://barkerlab.ucdavis.edu/home/).

Committee comments. As amended on June 20, 2024, this measure states that, "for the purposes of this section [measure], biological control includes, but is not limited to, bats as pest suppressors, dragonfly preservation and restoration, and controls that address invasive crayfish species."

Committee Staff understands that, while most bats as pest suppressors, dragonfly preservation and restoration, and controls that address invasive crayfish species typically are not around areas prevalent with mosquitos and mosquito larvae, invasive red swamp crayfish continue to pose a serious threat and problem in the Santa Monica Mountains and other parts of Southern California. In fact, the Western Ecological Research Center ties the presence of invasive crayfish to higher numbers of mosquito larvae within the Santa Monica Mountains.

Moving forward, the author may wish to work with the Lab and other appropriate stakeholders in order to determine if the current definition of "biological control" is broad or narrow enough to capture all relevant aspects of the desired outcomes as established in this measure.

Related legislation. SB 1251 (Stern), which, at the time this analysis was published, was scheduled to be heard by the Assembly Committee on Utilities and Energy on July 1, 2024, in part, requires an electrical corporation to enter into a vector management agreement with a mosquito abatement district, vector control district, or city or county health department within 180 days of receiving a request from the district or department.

Prior legislation. AB 320 (Quirk), Chapter 422, Statutes of 2019, established CalSurv in statute.

AB 2892 (Quirk) of 2018, which was held on the Senate Committee on Appropriations Suspense File, was similar to AB 320 (Quirk), as referenced above, but would have housed CalSurv at CDPH.

SB 382 (Pan) of 2017, which was held on the Senate Committee on Appropriations Suspense File, would have created the California Mosquito Surveillance and Research Program Account to fund CalSurv and research grants to help mitigate the effects of increasing vector populations.

REGISTERED SUPPORT / OPPOSITION:

Support

None on file.

Opposition

None on file.

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