New Report Raises Significant Scientific Questions About Evidence Used to Support Aerial Spraying

Report Calls Aerial Pesticide Spraying for West Nile Virus a “Grand Experiment”

Sacramento, CA – Earlier today, Pesticide Watch Education Fund released a critique of aerial pesticide spraying for West Nile virus. The report was written in response to a May 2008 report authored by staff at the California Department of Public Health (CDPH) examining the effect of large-scale aerial pesticide spraying in Sacramento County in 2005. Today’s report casts doubt on the legitimacy of the science used to support the 2005 spray over thousands of acres and thousands of people. The report follows on the heels of the recent termination of the California Department of Food and Agriculture’s aerial pesticide spraying program for the light brown apple moth (LBAM) in response to outcry from the general public and scientific community.

“Local and state public health officials attempted to sell the science of aerial spraying, but failed to do their homework first,” said Paul Schramski Pesticide Watch Education Fund State Director and one of the authors of the study. “Public health officials should place a moratorium on future aerial pesticide spraying until it is proven both safe and effective while seeking safer mosquito controls in the interim.”

Vector control districts in the state have cited the CDPH study as evidence that their spray protocol works in their attempt to control West Nile virus. However, the report released today indicates that fatal errors in the design and conduct of the underlying study undermine any conclusions that can be drawn about the effectiveness of spraying.

“The California Department of Public Health report was fatally flawed, subjecting Sacramento area residents to a grand experiment because of the lack of scientific rigor,” added Jack Milton, Professor of Mathematics at the University of California—Davis and another of the study’s authors.

Pesticide Watch Education Fund report’s findings contradict the Sacramento Yolo Mosquito Vector Control District’s (SYMVCD) rationale for spraying pesticides to “break the transmission cycle” of the virus. The authors point out that the SYMVCD has repeatedly claimed that aerial pesticide spraying, and nothing else, works in slowing the transmission of WNv. The report indicates that in addition to the flaws of the CDPH study, there is currently no solid scientific evidence that spray “breaks the cycle” or even slows transmission to humans.
Attempts by local attorneys and the Sacramento City Councilman Rob Fong to obtain verifying information and data from the California Department of Public Health through the Public Records Act resulted in only partial success. Citing restrictions under the Health Information Protection Act, CDPH refused to disclose health summary data. The report notes, however, that the actual data is irrelevant because the methodology is flawed by design.

“We sorted through the California Department of Public Health’s data for pesticide spraying, and what we’ve found is, it doesn’t add up,” said Sacramento Councilman Rob Fong.

Problems outlined in the California Department of Public Health report include: 1) unwarranted assumptions, 2) buffer zones at the margins of the spray area were included as untreated areas, 3) the spray could not possibly have eliminated the virus under this spray schedule, 4) inappropriate and/or inapplicable statistics were used, and 5) scientific studies that used appropriate methodologies have been misinterpreted and used to make inappropriate assumptions and draw incorrect conclusions.

“We attempted to provide transparency to the California Department of Public Health report,” noting that it lacked the scientific rigor of scholarly publications, said Jim Northup, entomologist and another study author.

Residents across California have raised concerns about aerial pesticide spraying over the past three years, noting the majority of the pesticides sprayed over communities are made up of suspected carcinogens, according to the U.S. Environmental Protection Agency. Previous research conducted by mosquito control officials, like the Greater Los Angeles Vector Control District, has suggested that ground-based spraying may yield limited results as reported in the Pasadena Star in 2004. In addition, many Californians remain concerned about the lack of notification as Tracy City Councilperson Irene Sundberg underscored last week on ABC News 10.

Report authors highlighted several of the greatest flaws with the CDPH report noting the wind’s effect on the spray and that West Nile virus was already on the decline, based on infection timelines. High winds interrupted the spray for eight consecutive days during the spray events. Wind inhibits the flight and biting behavior of mosquitoes, and it thus lowers mosquito counts dramatically. CDPH ignored the wind’s effect on the spray, yet the report used the wind-reduced mosquito counts to support the conclusions of effectiveness of the spray. In contrast to most of the CDPH report, data available on the CDPH website demonstrate that the virus transmission was declining prior to the spray, as do the Sacramento 2005 and Yolo 2006 timelines.

The report also suggest that WNv follows the course of other mosquito-borne diseases that have become endemic in California. From what is known from the scientific literature, WNv should follow the same life pattern of Western Equine Encephalitis (WEE). While that disease is more likely to produce a serious disease than is WNv, it has reached what is called chronic endemicity, and the levels of transmission are so very small, and cases so few, that it tends to be ignored by the public. Nonetheless, public officials have suggested that WNv is spreading, and that once firmly established in a region, the disease will cause increased rates of infection and greater numbers of serious cases of the disease. Based upon the data, WNv is following the course of WEE into chronic endemicity.
“Public health officials should adopt sensible policies based on sound science rather than react to perceptions and conjecture,” said Milton.

“An Alternate Perspective on the Use of Aerial ULV Spray to Attempt to Control Transmission of West Nile Virus in Sacramento County, 2005” is authored by Jim Northup, Jack Milton and Paul Schramski and was released by Pesticide Watch Education Fund.

The full report can be found at http://www.pesticidewatch.org/get-information/reports

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