

Adulticiding Frequently Asked Questions

Q. Why is the District treating for adult mosquitoes?

A. If West Nile virus is detected in the community, the District's initial response will be to intensify its efforts to reduce mosquito breeding sites and increase its levels of larviciding in those areas in which West Nile virus has been found. Reducing the adult mosquito population with pesticides (adulticides) registered by the US Environmental Protection Agency (EPA) will be done if necessary to prevent human illness or to suppress a heavy nuisance infestation of mosquitoes. The decision to treat adult mosquitoes, either by truck mounted sprayers or by aircraft, will be based on surveillance information or the documentation of West Nile virus activity at a level that indicates a threat to human health. Treatments will be concentrated in areas most at risk for disease occurrence and will be conducted by certified and licensed applicators. The District's aggressive campaign against mosquito larvae is intended to minimize the need to use adulticides.

Q. What are larvicides and adulticides?

A: Control of mosquitoes in their larval stages is the backbone of most mosquito control programs in California. Larvicides are products used to reduce immature mosquito populations when they are still in the water. Larvicides, which can be biological or chemical, are applied directly to water sources that hold mosquito eggs and larvae. When used well, larvicides can help to reduce the overall mosquito population by limiting the number of new mosquitoes produced.

Adulticides are products that rapidly reduce adult mosquito populations. This can become necessary when larval control measures are insufficient or not feasible. Adulticiding may be initiated when there is evidence of significant West Nile virus transmission in a region. The most common method of adulticiding is ultra-low volume (ULV) spraying. ULV spraying is the process of putting very small amounts of liquid into the air as a fine mist of droplets. These droplets float on the air currents and quickly eliminate mosquitoes that come into contact with them. ULV adulticides are applied when mosquitoes are most active-typically early evening or pre-dawn. They can be applied from hand-held sprayers, truck-mounted sprayers or airplanes. Adulticides immediately reduce the number of adult mosquitoes in an area, with the goal of reducing the number of mosquitoes that can bite people and possibly transmit West Nile virus.

Q. What pesticides will you use?

A. When necessary, our District may use ground and aerial application of pesticides to kill mosquitoes that pose a health risk to the residents of Alameda County. In the case of adulticiding, or targeting adult mosquitoes, we would use botanical insecticides (plant derived compounds) or synthetic versions that include pyrethrins and synthetic pyrethroids, as well as

piperonyl butoxide. All of the products we use are registered with the Environmental Protection Agency and applied according to label directions by our trained and certified technicians.

Q. What are the risks to the environment?

A. The risks to the public and to the environment are very low. Mosquito adulticides are applied as ultra-low volume (ULV) sprays. ULV applications involve small quantities of active ingredient in relation to the size of the area treated, typically less than 2 ounces per acre, which minimizes exposure and risk to people and the environment.

Q. Where will the spraying take place?

A. The spraying will take place in areas of concern, as determined by our mosquito and disease surveillance programs. Our trained and certified technicians use a variety of surveillance techniques and treatment criteria to ensure effective mosquito control with the least amount of risk to our residents and our environment. Maps of target areas will be posted on our website prior to treatments.

Q. What does weather permitting mean?

A. For the most effective results, adulticides should be applied when meteorological conditions create a temperature inversion and wind speed does not exceed 10 mph.

Q. How will these insecticides affect me and my family?

A. The risks to the public and to the environment are very low. Mosquito adulticides are applied as ultra-low volume (ULV) sprays. ULV applications involve small quantities of active ingredient in relation to the size of the area treated, typically less than 2 ounces per acre, which minimizes exposure and risk to people and the environment. At the rates we apply these products, they should not pose a significant risk to you or your family, and in fact, are used at a higher rate to treat head lice in children; however, it is always a good idea to remain indoors and keep windows and doors closed during applications. For more information on insecticides and health, consult the U.S. [Environmental Protection Agency](#), which oversees the registration of these chemicals. The [National Pesticide Information Center \(NPIC\)](#) can also provide information through a toll-free number, 1-800-858-7378 or online.

Q. Should I Take Steps to Reduce Exposure to Pesticides During Mosquito Control Spraying?

A. Generally, there is no need to relocate during mosquito control spraying. The pesticides have been evaluated for this use and found to pose minimal risks to human health and the environment when used according to label directions. All of the products we use are registered with the Environmental Protection Agency for controlling mosquitoes and protecting the public.

Although mosquito control pesticides pose very low risks, some people may prefer to avoid or even further minimize exposure. People who suffer from chemical sensitivities or feel spraying may aggravate a preexisting health condition may:

- Consult their physician or local health department and take special measures to avoid exposure.
- Close windows and turn off window-unit air conditioners when spraying is taking place in the immediate area.

Q. Can pets go outside during spraying?

A: The materials used for controlling mosquitoes used in accordance to the label are not harmful to animals. Many times it is same materials used to treat cats and dogs for fleas and ticks. However if you want to reduce your pet's exposure, keep them inside during spraying.

Q. Will the adult mosquito treatment affect my swimming pool water, lawn furniture, play equipment, toys, etc?

A: Your swimming pool water and items found in your yard should not be affected. Applications are made in the very early morning hours or late evening hours, and pyrethrins break down rapidly in sunlight.

Q. What if I have a vegetable or fruit garden?

A: Just as you normally would, wash your vegetables and fruit before you eat them.

Q. What training is required for workers who apply insecticides?

A: Each state has mandated training and experience requirements that must be met before an individual can commercially apply insecticides. In California, for example, California State Health and Safety Code requires that every employee of a mosquito abatement or vector control district who handles, applies, or supervises the use of any insecticide for public health purposes be certified by the Vector-Borne Disease Section of the California Department of Public Health (DPH) as a Certified Vector Control Technician, and upon certification, must also meet established continuing education hours. In addition, these applicators must follow the instructions and precautions that are printed on the insecticide label. All insecticide products are required to have a label which provides information, including instructions on how to apply the insecticide and precautions to be taken to prevent health environmental effects. All labels are required to be approved by U.S. [Environmental Protection Agency](#).

Q. What is the Centers for Disease Control's (CDC) position regarding the use of chemical mosquito control?

A: Chemical control measures are one part of a comprehensive and integrated mosquito management program. An integrated program is the most effective way to prevent and control mosquito-borne disease. An integrated mosquito management program should include several components: surveillance (monitoring levels of mosquito activity, and where virus transmission is occurring), (2) reduction of mosquito breeding sites, (3) community outreach and public education, and (4) the ability to use chemical and biological methods to control both mosquito larvae and adult mosquitoes. [CDC's Revised Guidelines for Surveillance, Prevention, and Control of West Nile Virus in the US, 2003 \[254 KB, 77 pp\].](#)) provides detailed guidance about the use of control measures, including suggestions for a phased response and the actions that are possible at different levels of virus activity.

Q. Where can I get additional information regarding specific insecticides?

A: Questions concerning specific insecticides can be directed to the U.S. [Environmental Protection Agency](#), as this agency has responsibility for registration of insecticides. Many issues are addressed on the [EPA's Mosquito Control Web site](#).

The [National Pesticide Information Center \(NPIC\)](#) provides insecticide information and questions about the impact of insecticide use on human health. NPIC is cooperatively sponsored by [Oregon State University](#) and the U.S. [Environmental Protection Agency](#).

NPIC can be reached online or toll-free: 1-800-858-7378.