County of Santa Clara

Consumer and Environmental Protection Agency

Vector Control District
1580 Berger Drive
San José, CA 95112
West Nile Virus Hotline: (408) 282-3114
Main line: (408) 918-4770 | Fax: (408) 298-6356
www.sccvector.org

FREQUENTLY ASKED QUESTIONS (FAQ) ABOUT MERUS® TREATMENT

Q. Why is it important to control adult mosquitoes?
A. Mosquitoes need a blood meal to live, and when they feed, they can transmit West Nile virus to people. Humans, horses, and other animals can get sick and possibly die from a West Nile virus infection. West Nile does not cause symptoms in most people, but in some individuals, it can cause fever, headache, body aches, and in severe cases can also cause significant neurological damage or death. Adults older than 50 years old, and individuals with certain chronic medical conditions, such as diabetes, high blood pressure, cancer, and kidney disease are most at risk for serious complications. Our adult mosquito control treatments kill mosquitoes that are infected with West Nile virus in an area. Visit https://vector.sccgov.org/programs-and-services/mosquitoes to learn more about mosquitoes and West Nile virus.

Q. What time of year does the County of Santa Clara Vector Control District start adult mosquito control?
A. The District uses insecticides to kill adult mosquitoes only when West Nile virus-infected mosquitoes are detected. Mosquito and West Nile virus season usually happens between May and September.

Q. How can I receive notification of mosquito control treatments?
A. We send notifications through Twitter, Facebook, and Instagram (@SCCVCD), AlertSCC, Nextdoor, Mailchimp, and on our website at www.sccvector.org (a map of the treatment zone can be found there). In addition, mosquito control treatments are always preceded by releases to the news media.

Q. How does the District apply the insecticide during adult mosquito control?
A. The product is sprayed by a truck-mounted fogger using a very small amount of pesticide in a process known as Ultra Low Volume (ULV) treatment. The mist of microscopic droplets or treatment is airborne and is not intended to leave significant residues. Flying mosquitoes are killed by contact with the pesticide. Adult mosquito control is only done at night when most mosquitoes are flying, and traffic is minimal.

Q. What type of insecticide is used by the District for adult mosquito control?
One of the materials that we currently use is Merus 3.0, an undiluted botanical insecticide derived from chrysanthemum flowers. This product is approved by the Organic Materials Review Institute (OMRI) for use in organic production.

Q. How will this insecticide affect my family and me?
A. At the rates that insecticide products are applied in Santa Clara County, there should be no significant risk to you and your family. There is no need to relocate during the adult mosquito control treatment. If you want to keep your family and pets away from insecticide droplets, keep them inside during the treatment, and shut your doors and windows.

Q. Will the insecticide affect my lawn furniture, play equipment, toys, garden plants, swimming pool water, etc.?
A. The active ingredient in the insecticide (pyrethrin) degrades rapidly in the environment. It should not affect car paints or other painted surfaces. If you are still worried about residue on your food or children's play items, wash or wipe them down before use.

Q. Will the insecticide affect pets?
A. Merus does not affect pets. At ULV application rates, Merus has a significant margin of safety for mammals, birds, fish, and reptiles. In fact, the active ingredient in flea and tick control, pyrethrin, is used in much higher doses and applied on the skin of both dogs and cats. If you are concerned about direct treatment exposure to your pets, bring them indoors during the treatment. Any toys, water dishes, and other items that stay outside can be washed or wiped down before pets use them again.

Q. What if I am pregnant?
A. At ULV application rates, there are no special precautions needed for pregnant women. However, if you wish to minimize exposure, closing windows and turning off air circulation systems will suffice. If you have medical concerns, consult your physician.

Q. How do we know that adult mosquito control treatments will not cause negative health effects?
A. Our Science Research Page provides peer-reviewed science literature on this and other related topics. If you feel ill after a mosquito control treatment, you should see your physician.

Q. How does the mosquito control insecticide reach my back yard?
A. Once the insecticide is released from the truck-mounted fogger, the microscopic droplets follow the air currents wherever they go. Some will go over the house and some will go around.

Q. Will the ground treatment affect fruits and vegetables?
A. Normal washing of fruits and vegetables is recommended before consumption. Merus 3.0 is

approved for use on organic production and quickly breaks down in sunlight.

Q. Will this product affect bees?
A. Pyrethrin is toxic to bees when its directly applied to them, however, treatment is done late at night (usually starting around 10 PM), when mosquitoes are active, and bees are not. Bees are inactive starting one hour after sunset to two hours before sunrise. Local field tests with Merus 3.0 showed bee survival after treatment ranging from 25 to 175 feet away. If you are worried about your hives, you can provide extra protection by covering the entrances with wet burlap during the treatment operation. The claims that problems with bee colonies are purely due to pesticide applications have not been supported. No single factor or pattern of factors have been proven to be the "cause" of the decline or of Colony Collapse Disorder (CCD). Parasites, pathogens, poor nutrition, drought, bee management practices, habitat fragmentation, and pesticides are thought to be potential factors.

Q. How low is Ultra Low?
A. To picture the low volume dose of pyrethrins used during treatment operations, consider that the volume of Merus 3.0 liquid is roughly equivalent to spreading 1 1/3 tablespoons or 7 ½ thimblefuls of liquid over a football field, and the amount of active ingredient (pyrethrins) applied amounts to about half a penny's weight per acre.

Q. Will the treatment cause reduced visibility when I am driving in the neighborhood?
A. No, the ULV treatment is very dilute and will not reduce visibility for driving or other activities.

Q. How long does the adult mosquito control treatment take?
A. Adult mosquito control treatments begin around 10:00 p.m. and are usually completed by 2:00 a.m. the following morning.

Q. How long does the insecticide stay in the area?
A. The insecticide does not stay in a given area. Ideally, the mist drifts through the neighborhood with air currents traveling above one mile per hour. As it travels down wind, it becomes more diluted.

Q. Do District staff need to access my property?
A. No, our adult mosquito control is done using truck mounted units which travel slowly down the street.

Q. I didn't hear anything last night. Does that mean the adult mosquito control was cancelled?
A. No. Most of our adult mosquito control units are designed to be very quiet, so most people will probably not hear them as they pass down the street. However, if conditions like wind speed and temperature are out of range for successful control, the treatment will be

postponed. If they are postponed, the District will notify residents through Facebook, Instagram, and Twitter (@SCCVCD), Mailchimp, Nextdoor, and through the District website at www.sccvector.org

Q. Where can I get additional information regarding specific insecticides?
A. Questions concerning Merus 3.0 can be directed to the U.S. Environmental Protection Agency, by visiting www.epa.gov and typing “pyrethrin” or “Merus” in the search box. More information can also be found at the National Pesticide Center’s website http://npic.orst.edu or by calling 1-800-858-7378.