



Aerial Spraying for Mosquitoes in Tarrant County

Frequently Asked Questions

September 2020

The level of West Nile Virus (WNV) currently being seen in Tarrant County warrants aerial treatment to reduce the mosquito population and thus reduce the amount of human WNV cases.

Tarrant County Public Health (TCPH) has consulted with the [U.S. Centers for Disease Control and Prevention](#), the [Environmental Protection Agency](#) (EPA), the [Texas Department of State Health Services](#) and many other mosquito control agencies throughout the country to determine the best ways to reduce the high incidence rate of West Nile virus (WNV) currently being transmitted by the mosquito population in Tarrant County. [TCPH has a response plan](#) designed to follow Integrated Pest Management practices that are commonly performed by public health agencies throughout the United States.

These spray events will be performed to treat areas that are unable to be accessed via conventional ground-based spraying applications. Throughout the United States, an ultra-low volume (ULV) mosquito spray is commonly used during such aerial applications and the primary chemical used is Dibrom.

What is Dibrom?

Dibrom is an insecticide registered by the EPA since 1959 for use in the United States. It is used primarily for controlling adult mosquitoes. It is used on food and feed crops, livestock pastures, and in greenhouses for controlling black flies, houseflies, gnats and certain other nuisance insects. When applied in accordance with the recommended safety precautions, Dibrom can be used to kill mosquitoes without endangering the environment or human activities. Dibrom has been used to control mosquito populations following natural disaster events like floods and hurricanes. In 2017, it was used to treat 2.7 million acres post Hurricane Harvey throughout many counties in Texas. Aerial treatment with Dibrom also helped successfully break the transmission cycle of Zika virus in Miami-Dade in 2016.

How is Dibrom used in mosquito control operations?

In mosquito control programs, Dibrom is commonly applied as an ultra-low volume (ULV) spray by aircraft-mounted sprayers. ULV sprayers dispense very fine aerosol droplets that stay aloft and kill mosquitoes on contact. ULV applications involve small quantities of the pesticide in relation to the size of the area to be treated. Depending upon the commercial formulation, the rate of application for Dibrom in mosquito control ranges between 0.5-1.2 ounces per acre. At this rate, exposure and risks to humans, animals and the environment are minimal.

Does Dibrom pose risks to human health?

Dibrom can be used for controlling mosquitoes without endangering human health when applied in the amounts recommended on the label. Since the amount of Dibrom released per acre is very small, any potential human exposure to Dibrom would be several hundreds or thousands of times below an amount that might pose a health concern. During aerial spraying, a small amount of insecticide is sprayed over an area, about one ounce (two tablespoons) per acre or roughly the size of a football field. Studies conducted in the workplace have not shown any harmful effects to workers who breathed in low levels of Dibrom. Ingestion or inhalation of Dibrom, in amounts several times higher than those associated with mosquito control, can cause nausea, dizziness, salivation, headaches, confusion and blurred vision.



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Does Dibrom cause cancer, birth defects, or reproductive effects?

Studies in experimental animals have not shown Dibrom to cause cancer, birth defects, or adverse effects on reproduction. The EPA has classified Dibrom in Group E “Evidence of non-carcinogenicity for humans.”

What happens to Dibrom when it enters the environment?

Dibrom immediately begins to breakdown upon release of the spray droplets in the open air. Dibrom breaks down rapidly in water and in sunlight. A breakdown product of Dibrom is called Dichlorovos (DDVP) which is very short-lived and does not persist in the environments. In small amounts, DDVP is short-lived, does not pose any risk to humans, and does not persist in the environment.

Does Dibrom pose risks to pets, fish, birds, and livestock?

If used properly in accordance with the label, Dibrom is not harmful to pets, fish, birds or livestock. Residents may elect to bring pets indoors or cover fishponds during spraying events to minimize exposure. Please note to remove the covers following spraying to prevent oxygen depletion in fishponds.

Is Dibrom harmful to bees?

All spraying operations will be conducted during nighttime hours as they target nocturnal Culex mosquitoes, the primary vectors for West Nile virus. Exposure to bees or other pollinators should not occur as the spraying happens after the bees have returned to their hives. Though the amount applied is formulated to target much smaller insects than bees, beekeepers may elect to cover hives during the spraying operations to reduce exposure.

Should I cover my vegetable garden during spraying?

Although not necessary, residents may elect to cover their gardens while spraying takes place. It is always a good practice to wash any fruits or vegetables before consumption.

Is it safe to swim in the swimming pool after spraying?

Dibrom breaks down quickly in water and in sunlight, so no special waiting period is required. Residents may elect to cover pools and jacuzzi during spraying events.

What can I do to reduce exposure to Dibrom?

If planning to be outdoors during a spray event, you can take the following steps to help reduce possible exposure to Dibrom during spraying:

1. **Avoid eye contact.** If contact does occur, immediately wash with water
2. **Avoid skin contact.** If exposed skin contact does occur, immediately wash with soap and water.



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