



ST. JOSEPH COUNTY
DEPARTMENT OF HEALTH
Prevent. Promote. Protect.

St. Joseph County Department of Health

"Promoting physical and mental health and facilitating the prevention of disease, injury and disability for all St. Joseph County residents"

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St. Joseph County Department of Health's Mosquito Adulticiding (Fogging) Procedure

In order to best prevent the spread of disease and protect the citizens and visitors of St. Joseph County, the St. Joseph County Department of Health may periodically practice the adulticiding of mosquitoes. This predominately is done by truck mounted ultra-low volume (ULV) spraying, commonly referred to as "fogging." ULV spraying is an important aspect of Integrated Mosquito Management. A study done in California showed that the odds of being infected by West Nile Virus were approximately 6 times higher in untreated areas as opposed to areas where adulticiding occurred.^[1] In an effort to limit resistance buildup and appropriately utilize taxpayer funds, ULV spraying is performed on a limited basis in areas where public health is impacted. The typical reason for spraying is definitive proof of an arbovirus (such as West Nile Virus or Eastern Equine Encephalitis Virus) in an area, such proof provided by the testing of adult mosquitoes trapped at site. The spray zone is computed by factoring in the flight range of the offending mosquito and omitting pesticide-sensitive areas such as bodies of water, mapped beehives, and mapped specialty crop areas. Spraying commences at dusk to limit exposure to non-target species and is weather dependent.

All spraying activities are done by personnel licensed by the Office of the Indiana State Chemist and products are applied per the product label. There is no regulatory requirement for advance notice to the public prior to performing a chemical application. However, in the interest of transparency and openness, the SJCDoH is opting to post a spray zone fact sheet for public viewing to our website and/or social media before the spraying occurs. The website will be updated no later than 5:00pm as to whether a spraying event is scheduled for that evening or not. In the event of a large-scale outbreak, state of emergency, or other atypical situation, additional public notification may be warranted.

The application of ULV mosquito adulticides is safe. There is no need for people or pets to leave an area where an application is taking place. The chemical is sprayed at rates approximately an ounce per acre, which is less than a shot glass-full per football field. Research indicates the overwhelming safety of ULV applications. Prefrakes *et al.* state in their 2011 paper that "...exposures and risks to humans from ULV insecticides are well below regulatory levels of concern"^[2] Multiple studies showed that ULV applications do not correlate with increased asthma-related hospital visits^[3-4] and that the human body metabolizes absorbed mosquito adulticides so quickly that there is not a statistical difference from pre- and post-exposure to ULV applications.^[5] Environmental impacts are also minimal, as the chemicals breakdown by sunlight very rapidly and do not leech into groundwater.^[6]

Additional information is available upon request. Please direct any comments, questions, or concerns to Brett Davis, Assistant Director of Environmental Health, bdavis@sjcindiana.com.

Sources:

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- [3]: Karpati AM, Perrin MC, Matte T, Leighton J, Schwartz J, Barr RG. Pesticide spraying for West Nile virus control and emergency department asthma visits in New York City, 2000. *Environ. Health Perspect*. 2004;112:1183–1187.
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- [6]: Bond, C.; Buhl, K.; Stone, D. 2014. *Pyrethrins General Fact Sheet*; National Pesticide Information Center, Oregon State University Extension Services. <http://npic.orst.edu/factsheets/pyrethrins.html>.