SFIREG Issue Paper - Revision DRAFT
Update 9/10/04

Submitted by: Region 6
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Issue: Use of Pesticides in Automated Misting Systems
Recent public concern over West Nile Virus has caused an increase in marketing of automated spraying systems installed in and around residential homes and property. These systems apply pesticides at timed intervals. This unmonitored application contributes to a greater potential for pesticide resistance, exposure, and subsequent harm to unprotected people, pets, wildlife and the environment.

Background:
Due to the growing national public concern over West Nile Virus, automated misting systems are being marketed and installed as a method for homeowners to control mosquitos in and around their homes and property in residential areas. This is extremely troublesome due to a high risk for exposure to people, pets, wildlife and the environment from unnecessary and arbitrary pesticide applications.

Problems attributed to use of these systems in residential areas include:

- **Uncertified Applicators** - The misting systems are often marketed and installed by companies whose employees have no experience or knowledge of pesticides or proper application. Many are not required to obtain commercial pesticide licensing as they only install the equipment and do not 'apply' the pesticide, therefore states may have limited abilities to regulate these individuals.
- **Unsubstantiated Claims** - A number of companies currently utilize the internet to advertise the service. Improper public health protection claims are being made on these sites. Current sites include: http://www.dfwpest.com/ , http://mosquitomister.com , http://www.gulfstatesmosquito.com , http://mosquitonix.com www.skeeterbeater.biz/systems.html , http://www.skeetercedar.com - this site advertises a cedar oil product 'approved' by EPA.
- **Off Site Drift** - Units are set to automatically spray at timed intervals causing unnecessary applications to be made which will have no effect on the pest. Off target spray drift is a potential in windy and/or rainy conditions. Photos supplied on the above web sites document the installed systems spraying in areas around the home such as under the eaves, around pools, dining patios and play structures. Often installation includes areas around the property perimeter without regard for possible consequences on neighboring property.
- **Human Exposure Risks** - In 2000, the U.S. Center for Disease Control and Prevention (CDC) published an article which identified 97 cases of human illness associated with use of automatic insecticide dispensers. The article can be found at: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4922a3.htm Remote control units are available possibly allowing the application to be 'controlled' by children or teens 'playing' with the system causing potential harm to unsuspecting friends or pets. The pesticides are sold or provided to the homeowners to 'maintain' the system often without any warning about the need for proper mixing, use, disposal, and the potential for harm.
- **Non Target or Endangered Species Exposure** - Installation of these systems around property which borders areas inhabited by wildlife may draw animals as a watering

source if nozzles drip. Birds may utilize the installed lines to perch and also utilize nozzles as a water source. Unsuspecting birds and mammals may possibly be endangered species.

- **Misuse** - New Mexico and other Region 6 states see a potential for this use to be applied to misting systems currently used as a means of outdoor evaporative cooling, through addition of a pesticide. Many homes utilize these systems and may mistakenly consider them as a method of mosquito or fly control because of the similarity to the mosquito misting systems.
- **Discourages IPM -** Vector control Departments and Mosquito Abatement Districts are attempting to provide mosquito control through homeowner education and use of IPM techniques such as getting rid of breeding sites, use of larvicides to maintain beneficial insect populations, and other cultural control methods. Use of these systems may discourage homeowners from assisting in effectively addressing and preventing mosquito problems by allowing only a 'perceived' or 'band-aid' effect through use of these systems.
- **Increased Resistance** - A resistance problem caused by continual, indiscriminate applications of the pyrethrum or pyrethroid class of insecticides through automated systems will result in a control failure or use of pesticides with active ingredients with higher concentrations and toxicities. This will remove tools vital to effective mosquito management programs. Public Health programs currently face limited budgets which will be further constrained due to the higher costs associated with managing established resistance. A resistance database by Michigan State University, Center for Integrated Plant Systems indicates permethrin resistance documented in species of *Aedes*, *Anopheles*, & 3 Culex. Also records of *Aedes* and *Anopheles* resistant to pyrethroids. This data is found at www.pesticideresistance.org/DB/

Persons (or Individuals) involved in pesticide safety education programs support this SFIREG Paper relating to the regulation of Automated Misting Machines. They believe that use for mosquito control in residential settings should be disallowed. They also believe the use is in direct opposition of all of the principles of integrated mosquito (pest) management espoused by the Environmental Protection Agency and promoted in the Joint Statement on Mosquito Control in the United States from the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control and Presentation (CDC).

Recommendation:
Since little authority is available to fully regulate automated misting systems as application equipment, and to provide the most direct solution, EPA should specifically disallow this use in urban environments. Labels should specifically prohibit the use of pesticides in automated misting systems in residential (including both single and multifamily dwellings) areas, including schools and daycares. Regulatory officials will then have the authority to regulate this use as a label violation. This action is also necessary to maintain EPA's goal of promotion of Integrated Pest Management (IPM) and protection of the environment and public health from pesticide misuse. In IPM, the most effective treatment is prevention of a pest problem. EPA has an opportunity for proactive prevention of harm to human health and the environment through issuance of a PR notice to manufacturers, developed to require label language prohibiting residential uses of pesticides in automated misting systems.

Recommended Priority: High