no
spray
sacramento

West Nile Spraying: Summary of Concerns

It is the position of No Spray Sacramento that widespread pesticide spraying to control adult mosquitoes and West Nile virus is reactionary and of questionable effectiveness. Repeated and widespread spraying is required to gain, at best, only partial and short-term reductions in mosquito populations.[1] In light of the risks associated with pesticide exposure to people and the environment, we support an emphasis on preventative methods of mosquito control which include aggressive water management, comprehensive public outreach and continued mosquito larvae control.

The following are key reasons why we question the use of adulticides to prevent West Nile:

1. West Nile is generally a mild illness that affects few people, even during peak infection years.[2] Less than 1% of the few who do become infected with the virus may experience serious symptoms. The elderly and immune compromised are most at risk for developing debilitating symptoms of West Nile – children are not at increased risk for becoming infected or experiencing illness if infected.[4] West Nile is not passed from person to person, and people do not serve as reservoirs, as birds do, for the virus.

2. There are known risks associated with pesticide exposure in addition to a likely variety of unknown risks. The chemicals in Evergreen 60-6, the pesticide formula used to control adult mosquitoes through aerial spraying, include pyrethrin (6% of the spray) and piperonyl butoxide, or PBO (60% of the spray), along with inert ingredients, which are not disclosed to the public.

- **The presentation of pyrethrin as being safe and "natural" is intentionally misleading.**
  - The U.S. Environmental Protection Agency has classified pyrethrins as "likely to be carcinogenic to humans". [9]
  - Pyrethrin is known to be highly toxic to fish and tadpoles, and toxic to beneficial insects that prey on mosquitoes and many aquatic invertebrates.[10]
  - Exposure to pyrethrin is associated with brain tumors in children.[11]
- **PBO is added to the pesticide to inhibit the metabolism of pyrethrin and increase its toxicity.** [12]
  - PBO is a suspected carcinogen, and a suspected liver, reproductive and neurotoxin. [1]
  - Public health officials and vector control management mislead the public into accepting pesticide exposure as low risk by failing to acknowledge that PBO renders pyrethrin up to 150 times more toxic than EPA testing, which is done on single ingredients, shows.[14]
- **Pesticide mixtures pose serious risks to people and the environment.**
  - Ingredients in the pesticide sprayed over Sacramento county may combine with other chemicals to create mixtures that can be vastly more toxic to humans and the environment than tests on single ingredients suggest.[8]
  - This phenomenon has been documented even when individual pesticides in the mixture are present at extremely low concentrations.

- **Reassurances of insignificant pesticide exposure do not reflect the amount of area sprayed (approximately 115,000 acres in 2005) or the necessity for repeat applications.** Drift and runoff issues also make predictions of exposure problematic.[13]
- **Potentially toxic levels of pesticide residues were found in local waterways after spraying.**[14] Despite reassurances that the pesticide would be destroyed by sunlight "in a matter of hours",[3] water sampling done after spraying showed 6 out of 10 samples contained pesticide residues. Four samples showed increasing pesticide concentrations up to the time when sampling was ended 20 hours after the spraying.

3.Widespread pesticide spraying has not been shown to be effective, and may actually create conditions that lead to greater than expected cases of West Nile infections. [1] Pesticide spraying may lead to a vicious cycle that paves the way for season after season of West Nile spraying. Our local vector control district's manager has speculated that the adulticide spraying conducted in the summer of 2005 may have contributed to anticipated greater than expected rates of West Nile this coming mosquito season. [15] And an analysis conducted by the Department of Health Services shows that at most last summer's spraying prevented only a handful of cases.[16]

Interruption of spraying schedules caused by the Delta winds, mosquito resistance to pesticides, pesticide related reduction of mosquito eating insect populations, inaccessibility of mosquitoes, and abandonment of water management and personal protection measures by the public (due to reliance on pesticide spraying) combine to limit the effectiveness of adulticide spraying to, at best, a temporary reduction in mosquitoes.

Course of action

No Spray Sacramento calls on our city leaders to pursue a citywide opt-out of adulticide spraying in residential areas. In place of supporting adulticide spraying, our city must implement a comprehensive public outreach campaign aimed at educating city residents about preventing West Nile, with an emphasis on the need to eliminate standing water and other mosquito breeding habitats.

The Sacramento/Yolo Mosquito and Vector Control District's focus on public relations instead of public outreach and education is not serving the people of our city. A large percentage of their outreach efforts are targeted at school age children, who are expected to communicate to their parents the urgent and complex message of how to prevent West Nile. This approach is also an ineffective method for communicating with the largest group of people who are at risk for getting ill due to West Nile – the elderly.

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