

San Gabriel Valley Mosquito and Vector Control District

Manager Blog
August, 2014



Kenn Fujioka
District Manager

The Facts about Pesticide Use and Treatment Planning

The San Gabriel Valley Mosquito and Vector Control District is a public health agency charged with managing vectors that cause human disease. We use an integrated approach that includes education, surveillance, and management. The component of our integrated program that is most commonly misunderstood is when, how, and why we use pesticides.

Large-scale treatments

When the risk for human disease reaches a specific threshold because the population of infected vectors is sufficiently high pesticides may be applied on a large scale. These treatments are made with a truck-mounted applicator that disperses an ultra-low volume mist into the air. All of the pesticides we use are registered with the US Environmental Protection Agency (EPA) and are chosen based on their ability to have a maximum effect on target organisms while having a minimal effect on humans, pets, and the environment.

How do we decide when and where to implement large-scale treatments?

Education and prevention are our preferred strategies to manage vectors, but pesticides provide immediate results when a threat to public health is imminent. Ecologists survey mosquito populations, assess the presence of viruses which can cause disease, and analyze the risk to public health. Our office team takes calls from residents and logs complaints of excessive mosquito activity and reports of dead birds. We use these data to determine whether a large-scale treatment is necessary. For example, if West Nile virus was found in samples of mosquitoes we collected, antibodies to the virus were found nearby in a sentinel chicken flock, and our residents were complaining about being bitten by mosquitoes and reporting many dead birds, an application of pesticide would be scheduled to reduce the number of adult mosquitoes in this area. Maps of all of our large-scale treatments are placed on our website and are available to the general public.

How do we decide which pesticide to use?

The pesticides we use each serve a specific purpose. Before we apply any pesticides, we first determine the target species, the stage in its life cycle we intend to manage,

how long the pesticide must persist to be effective, whether it affects non-target species, how it is applied, what its impact to the environment might be, whether any resistance to a pesticide has been observed, the application rate, and the treatment schedule. All of our staff who applies pesticides must be certified by the California Department of Public Health to do so.

Truck-mounted machines are used for most of our large-scale treatments. Larvicides target immature mosquitoes. These pesticides are very target specific and have little impact on people or the environment. Adulticides are generally less target specific; although safe when used according to the label.

Are the pesticides we use harmful to humans?

Pesticides in California are strictly regulated by the California Department of Pesticide Regulation (DPR). Their mission is to ensure that people and the environment are protected from adverse effects that may be associated with pesticide use. They scientifically evaluate and provide a risk assessment for every pesticide that is sold in California.

Every pesticide must have a label. The label must contain certain information, e.g., the active ingredient(s), the target pest, application instructions, potential harmful effects, and precautions for the applicator as well as others. The label also has one of three signal words that show how dangerous a pesticide can be to people; **Danger** (most toxic), **Warning** (less toxic but poses a specific hazard to people), and **Caution** (least toxic, least dangerous).

Currently the District has in its inventory roughly 25 pesticides designed to target different vectors in a variety of ways. All of these pesticides are designated with the signal word **Caution**. When used according to the label, all of the pesticides that we use have very little, if any adverse effects on humans.

The truck mounted ultra-low volume applicators we use for large-scale treatments are calibrated so pesticides are applied as fine droplets that are measured in microns (one millionth of a meter). Our adulticides are applied at rates that can be measured in tablespoons of pesticide per acre of land.

For more information on the EPA regulation of pesticides:

Assessing the health risk of Pesticides:

<http://www.cdpr.ca.gov/docs/dept/factshts/artic12.pdf>

Pesticides: What's my Risk?:

<http://npic.orst.edu/factsheets/WhatsMyRisk.pdf>

Using pesticides in California:

http://www.cdpr.ca.gov/docs/dept/comguide/using_excerpt.pdf

How do we notify the public?

The public deserves to receive accurate and current information. Before we conduct a large-scale pesticide treatment we use several avenues of communication to reach as many people as possible within the treatment area. We start with a press release several days before the treatment which includes the exact date, time, material, mode of application, necessary precautions, and a detailed map of the treatment area. The press release is sent to the local media, local government officials, public health agencies, and a list of residents who have asked to receive notifications. It is also posted on our website. We use both Facebook and Twitter to make multiple announcements and push notifications on Facebook to thousands of residents in the treatment area. At least 36 hours before the treatment, we post advisory notices with maps on sandwich boards at every street corner in the treatment area.

Is it possible to provide more notice?

We decide a treatment is necessary when our data show there is an immediate risk to public health. We must act quickly to diminish the threat and feel very strongly that we properly balance informing our residents with addressing threats to public health as soon as possible.

How can I receive alerts and information treatments?

The best way to stay connected is through our social media pages.

Facebook: San Gabriel Valley Mosquito and Vector Control

Twitter: @SGVMosquito

Please call or e-mail the District if you wish to receive press releases and public health alerts via email.

The website is another place to get current information. All of our treatments are listed there in the News and Events section. Information about all of our pesticides is also there on the Transparency page.

The San Gabriel Valley Mosquito and Vector Control District is committed to protecting both public health and the environment. The majority of the work that we do revolves around managing mosquitoes which kill more than 700,000 people per year; this makes them the most dangerous animal in the world. When pesticides are used responsibly they are an important weapon against this threat. Organizations like the California Department of Pesticide Regulation, the Environmental Protection Agency, the Department of Agriculture and the California Department of Public Health enforce regulations that make pesticides safer for all and hold accountable organizations that apply them. We hope this information makes clear our District's commitment to using pesticides as an effective part of an integrated plan that protects public health.