

## THE IMPORTANCE OF PUBLIC HEALTH PESTICIDES

## California Mosquito and Vector Control Districts Use a Variety of Methods to Control Mosquitoes and Protect Public Health

- Mosquito and Vector Control Districts in California use Integrated Vector Management (IVM), an evidence-based, data-driven approach to suppress mosquitoes and mosquito-borne diseases that affect public health.
- IVM incorporates various tools such as monitoring, source reduction, public education, and promoting effective water management to prevent recurrence of mosquitoes.
- When necessary, the use of public health pesticides is a vital component of IVM due to their versatility, effectiveness, and rapid deployment in comparison to other control methods.

## **Public Health Pesticides Are Evaluated and Regulated by State and Federal Agencies**



- The U.S. Environmental Protection Agency evaluates pesticides to ensure they can be used effectively without posing unreasonable risks to human health and the environment.
- The EPA places a special emphasis on children's health in making regulatory decisions about all registered pesticide products, including public health pesticides.
- The EPA requires scientific evidence that products used to control public health pests (such as those that carry West Nile virus and dengue virus) are effective against the target species.



- The California Department of Pesticide Regulation also evaluates and registers pesticide products to ensure the instructions and precautions printed on their labels do not adversely affect human health and the environment with a focus on California-specific uses.
- DPR also monitors pesticides in the air, surface water, and groundwater and evaluates new scientific information to ensure that people and the environment are protected from adverse effects.





## **Public Health Pesticides Are Needed to Control Mosquitoes at Different Life Stages**

The classes of pesticides used for public health applications are limited and generally fall into two categories: larval mosquito control and adult mosquito control.



**Larvicides** are pesticides used to target the immature larval stage of mosquitoes and are applied to localized water sources where mosquitoes lay eggs. Wide area larviciding strategy (WALS) involves using a fine mist that contains a small amount of pesticide to control mosquito larvae in a large area.

This type of public health pesticide application eliminates mosquitoes early in their development process before they mature to flying adults and have the ability to feed on humans or animals and spread diseases.



**Adulticides** are pesticides used to target the adult (mature) stage of mosquitoes. Adulticides are typically applied in very small amounts (less than 1 ounce per acre) through ultra-low volume (ULV) treatments to control adult mosquitoes in a large area.

This is the sole means of quickly killing adult mosquitoes that are capable of biting and transmitting harmful diseases such as West Nile virus or dengue to humans. Adulticides can effectively reduce mosquito populations over a large area and rapidly reduce disease transmission risk and protect public health.



