Residents should:

- Examine trees on property for holes, cavities or crotches that can hold water.

- Contact a tree specialist or a local nursery if holes are found to determine the best way to correct the problem.

- Prune, drain or fill holes with sand/dirt or spray foam to eliminate sources.

- Check and clean out gutters that collect plant debris and trap water.

- Empty, turn upside down or throw away containers that collect water such as cans, buckets and old tires.

- Use insect repellents to protect from mosquito bites.

Remember... eliminating standing water is the best method to prevent and control treehole mosquitoes.

The cooperation of every resident will help reduce the problem of treehole mosquitoes.

It is not possible for your mosquito abatement or vector control district to eliminate all treehole mosquitoes because of the many potential sources and the difficulty in locating them.
Aedes sierrensis is widespread throughout California.

Aedes sierrensis has a limited flight range. They are generally found close to breeding sites.

Biting peaks around dusk, but they will also bite during the day or night.

Aedes sierrensis first appear in early spring and can persist through summer.

Treehole mosquitoes are frequent pests in residential and recreational areas where large numbers of trees are present. As vicious biters, they are a severe nuisance and transmit dog heartworm in California. Adult mosquitoes of this species are very small, dark insects with brilliant white bands on their legs.

The outward symptoms of the disease are not noticeable in most cases until reduced blood flow caused by adult worms damages the heart, lungs, liver and kidneys. Advanced symptoms of heartworm may include:

- rapid tiring
- shortness of breath
- chronic soft dry cough
- listlessness
- weight loss

If you live in or travel to areas where treehole mosquitoes occur, check with your veterinarian regarding treatment and prevention. Several medications are available to prevent heartworm infection.

Heartworm infection is curable if it is diagnosed in the early stages. The treatment, however, can be expensive for owners and painful for pets.

Dog Heartworm noun: Canine heartworm disease is a clinical condition in dogs caused by the round worm *Dirofilaria immitis* which resides within the dog’s heart and lungs. This disease is a serious, possibly fatal veterinary problem associated with dogs, coyotes and foxes.

*Ae. sierrensis* is a major vector of dog heartworm. In Northern California, it has been implicated as the most important vector of this disease.

**Dog Heartworm Life Cycle**

- **Egg**
- **Larva**
- **Pupa**
- **Adult**

**Mosquito Life Cycle**

- **Egg**
- **Larva**
- **Pupa**
- **Adult**

**Heartworm Life Cycle**

- Reproduction
- Adult [7 to 8 months post infection]
- Larval development
- Larval development
- Adult
- Mosquito infects animal with Microfilariae (immature worms)
- Dogs are the primary host...
- but cats can get heartworms too!