Permethrin is a broad-spectrum insecticide that can be used to control a wide variety of insects found in agricultural crops, landscapes, and turf as well as in and around structures and for termite control. Permethrin is used to control insects such as aphids, ants, sawflies, cockroaches, flies, mosquitoes, psyllids, termites, thrips, and wood-boring beetles. Permethrin also can control animal parasites such as fleas and head lice. It is effective against all stages of insect growth, and it can be found in many forms including dusts, emulsifiable concentrates, smokes, wettable powders, and ultra-low-volume (ULV) sprays.

Potential hazards of permethrin:
- Low in toxicity to birds.
- Highly toxic to fish, aquatic invertebrates, and other aquatic organisms.
- Low to moderately toxic to mammals including people and pets.
- Highly toxic to bees and other beneficial insects.

Water quality issues:
Permethrin can attach to soil, which then can be carried by runoff in sediment into lakes, streams, and other bodies of water, poisoning small aquatic creatures. However, permethrin is very immobile in soil and is not considered a threat to groundwater contamination.

Tips for keeping permethrin out of water:
- Avoid perimeter sprays on hard surfaces around buildings, especially where water from irrigation or rain can wash the insecticide away.
- Do not apply near a body of water or near places where water drains into the street, gutters, and storm drains.
- Avoid runoff by not overwatering.
- Apply only when needed.
- Avoid application before the rainy season.

Options to consider when pesticides are recommended:
- Always select the least toxic product that can solve the problem and consider nonchemical alternatives. Always use pesticides in an integrated pest management program that includes a combination of methods.
- See the UC IPM Web site, www.ipm.ucdavis.edu, for nonchemical or safer chemical control alternatives.

More about permethrin:
- Permethrin is a broad-spectrum synthetic pyrethroid insecticide that works by direct contact, through stomach poisoning when the insect feeds on it, or as a repellent. Permethrin is used to control insects that chew or suck to feed.

For more pesticide and pest management information, visit the University of California IPM Web site at www.ipm.ucdavis.edu or the California Department of Pesticide Regulation Web site at www.cdpr.ca.gov.

The contents of this document do not necessarily reflect the views and policies of the California Department of Pesticide Regulation.