

Information and Resources

Practices for Mitigating Urban Pesticide Runoff

Ten practices that will help reduce the offsite movement of pesticides and avoid their negative impact on the environment:

1. Do not use a pesticide if it is not necessary.

- Correctly ID the pest and make sure a pest, and not an abiotic factor, is really causing the problem
- Consider alternative management methods
 - Pest - resistant plants, pruning, mulches, traps
 - Seal entryways, remove food sources, eliminate nesting sites, use baits
 - Water, fertilize, and prune plants appropriately
 - Encourage natural enemies

2. Check the weather before applying a pesticide to avoid pesticide runoff.

- Spray when wind is less than 10 mph
- Don't apply when rain is expected

3. Read the label.

- Check the active ingredient(s) and consider its potential for water quality problems
- Follow the directions and make sure the target pest and site are listed
- Use the product at the recommended rate

4. Choose an effective pesticide that poses the least risk to humans and water quality.

- All pyrethroids, fipronil, and some organophosphates are known for their high toxicity to aquatic species
- Use alternative insecticides such as *Bacillus thuringiensis*, insecticidal soaps, horticultural oils, or other less toxic products

5. Avoid use of pesticide formulations and application methods that allow pesticides to be easily carried away by water.

- Avoid applying granular formulations where they can be washed off
- Use baits instead of liquid sprays or granular materials if possible
- Use baits in stations

Information and Resources

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6. Adapt pesticide application methods to account for site-specific design and use.

- Don't apply pesticides over drains and near sloped areas
- Delay irrigation after application
- Leave an untreated buffer between the treated area and impervious surfaces

7. Verify that irrigation will not lead to runoff.

- Use drip irrigation, microsprinklers, or weather-based scheduling methods to help reduce weed pressure, disease and insect problems, and to minimize water running off of the property
- Split irrigation time into several short run times if water begins to run onto street or hard surfaces

8. Spot treat where possible.

- Only apply pesticide to the area needing treatment

9. Dispose of and store pesticides properly.

- Mix only what you need
- Don't dump pesticides down drains, sinks, sewers, gutters, or onto soil
- Apply unused pesticide to untreated application sites
- Take unwanted pesticides to a hazardous disposal site

10. Be prepared to handle spills.

- Keep a spill kit nearby containing personal protective equipment, absorbent material, waste container and lid
- Cover spills with absorbent material such as sand, kitty litter, sawdust
- Put contaminated material in a sealable plastic bag and dispose of it as hazardous waste

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Key resources:

Find your county extension office

- University of California Department of Agricultural and Natural Resources (http://ucanr.edu/County_Offices/)
- National Pesticide Information Center (<http://npic.orst.edu/countyext.htm>)

Pest identification and management methods

- UC Statewide IPM Program (www.ipm.ucanr.edu/)
- UC Weed Research and Information Center (<http://wric.ucdavis.edu>)

Information about pesticide products and safety

- California Department of Pesticide Regulation (www.cdpr.ca.gov/)
- U.S. Environmental Protection Agency (<http://www.epa.gov/pesticides/>)
- USDA Agricultural Research Service (www.ars.usda.gov)
- National Pesticide Information Center (<http://npic.orst.edu/gen.htm>)
- Pesticides and Urban Water Quality (<http://www.ipm.ucanr.edu/WATER/U/index.html>)
- WaterTOX water-related risks of pesticides (<http://www.ipm.ucanr.edu/TOX/simplewatertox.html>)
- EXTOXNET (<http://extoxnet.orst.edu/>)
- Pesticide Wise (www.pw.ucr.edu)

Publications – pesticide information is applicable to all types of application, not just agriculture

- Pesticide Choice: Best Management Practices (BMP) for Protecting Surface Water Quality in Agriculture (<http://anrcatalog.ucanr.edu/Items/8161.aspx>)
- Protecting Surface Water from Sediment-Associated Pesticides in Furrow-Irrigated Crops (<http://anrcatalog.ucanr.edu/Items/8403.aspx>)