

PROPERTY MAINTENANCE FACT SHEET



Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Landscape Maintenance Techniques for Pest Reduction

Who should use this Fact Sheet?

- Development Project Applicants
- City/County Planners
- Landscape Maintenance Personnel
- Landscape Architects
- Homeowners

Why is it Important to Reduce Pesticide Usage?

When it rains, pesticides used in maintaining landscapes and gardens are washed off the plants and soils they are used to protect. This stormwater runs off the landscape and flows to the nearest storm drain, which ultimately carries the water to a local creek or the San Francisco Bay without treatment. Pesticides carried with stormwater into creeks and the Bay may be harmful to fish and other organisms that live there. Minimizing use of pesticides in landscape maintenance helps protect water quality, aquatic life, and human health.

What is Integrated Pest Management?



Integrated Pest Management (IPM) is a decision-making process for managing pests that uses monitoring to determine pest-caused injury levels and determine the best methods for their control. IPM uses a combination of :

- biological controls (e.g., natural enemies or predators);
- physical or mechanical controls (e.g., hand labor or mowing);
- cultural controls (e.g., mulching, discing, or alternative plant type selection); and
- reduced risk chemical controls (e.g., soaps or oils)

in order to minimize pesticide usage. The IPM method uses the least hazardous pesticides only as a last resort for controlling pests.

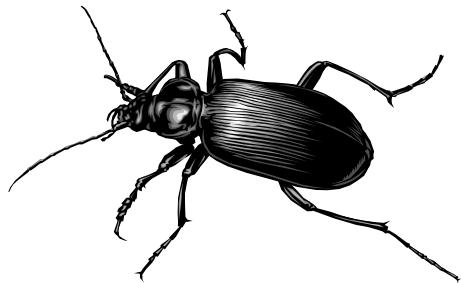
How Can Landscape Design and Maintenance Techniques Reduce Pesticide Usage?

Pesticides are often used in maintaining landscapes. The amount of pesticides entering our creeks and Bay can be decreased by using alternative design and maintenance techniques that:

- Reduce the potential for the pesticides to run off the landscape;
- Reduce the amount of chemicals necessary to ensure healthy plants or eliminate the need for pesticide usage at all; or,
- Decrease the need for landscape maintenance by designing landscapes that minimize pest infestation and create low maintenance environments.

Refer to the back of this fact sheet for more design and maintenance tips.





Pest Reducing Landscape Design Techniques

- Design the landscape for efficient irrigation and drainage.
- Design the landscape to conform to natural drainage patterns.
- Retain existing native, pest-resistant trees, shrubs and plants.
- Select pest-resistant plants adapted to your specific area. Consider site-specific characteristics such as the soil, topography, climate, amount and timing of sunlight, prevailing winds, rainfall, air movement, patterns of land use, ecological consistency and plant interactions.
- Prevent the need for routine pruning by selecting plants based on their size and shape when mature.
- Situate plants to facilitate maintenance. Install mowing strips, tree wells and pathway edging to reduce problems associated with maintaining the interface between different elements of the design.
- Plant at the right time of year.

Pest Reducing Landscape Maintenance Techniques

- Employ nonchemical Integrated Pest Management methods (biological, physical and cultural controls) before using chemicals to treat a pest problem.
- If pesticides are necessary, use the least toxic pesticide available. Avoid use of organophosphates such as diazinon and chlorpyrifos (Dursban) as well as copper-based pesticides.
- Do not over apply pesticide. Spray only where the infestation exists. Follow the manufacturer's instructions for mixing and applying materials.
- Properly sweep up spilled fertilizers or pesticides. Do not wash away or bury such spills.
- Properly dispose of chemical wastes by recycling, reusing, or disposing of as hazardous waste. Do not dispose of debris into or near channels or other waterways or leave it where it may contact runoff.
- Apply pesticides at the appropriate time to maximize their effectiveness and minimize the likelihood of discharging undegraded pesticides into runoff. With the exception of pre-emergent pesticides, avoid application if rain is expected.
- Maintain healthy soils by incorporating organic matter, making regular pH adjustments, and appropriately fertilizing.
- Do not overwater.
- Minimize irrigation overspray.
- Prune to increase air circulation but do not overprune.
- Apply 2-4 inches of mulch or geotextiles to exposed soils to prevent weed growth.
- Mow lawns and turf high and leave clippings in place.
- Replace problem plants with locally-adapted, pest resistant plants.
- Remove, rake up and dispose of diseased plant parts.

ADDITIONAL RESOURCES

IPM Access,
www.efn.org/~ipmpa, IPM
Based Landscape Design.



Bio-Integral Resource Center
(BIRC) (510) 524-2567
www.birc.org

Central Contra Costa County Sanitary District
Our Water Our World IPM Fact Sheets
www.centralsan.org

San Francisco Department of the Environment
www.sfenvironment.com

IPM Information: www.mywatershedwatch.org

University of California Cooperative Extension
Master Gardeners: www.mastergardeners.org

University of California IPM (800) 994-8849
www.ipm.ucdavis.edu

- Natural Enemies Handbook: The Illustrated Guide to Biological Pest Control
- The UC Guide to Solving Garden and Landscape Problems: An Interactive CD- ROM
- Pests of Landscape Trees and Shrubs