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## For Retail Nurseries: Best Management Practices for Protecting Local Waterways

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*Nursery employees can make a difference to our local creeks, bays and the ocean! Follow the guidance below to help keep pesticides, fertilizers, soil and debris out of storm drains. Remember, in Marin all storm drains lead directly to our local waterways.*

### GENERAL INFORMATION

- Label on-site storm drains with “No Dumping” medallions available free of charge from MCSTOPPP. Call 473-3202.
- Store pesticides properly and dispose of hazardous materials/wastes at the Hazardous Waste Collection Facility.
- Promote native plants to reduce the need for pesticides and fertilizers.
- Encourage beneficial predators and parasites to keep “pest” populations under control naturally.
- Consider not offering invasive plants in your store. Go to [www.cal-ipc.org/ip/index.php](http://www.cal-ipc.org/ip/index.php).
- If you receive plant stock or materials produced by other growers, establish procedures to ensure incoming stock is clean of invasive pests or diseases before you add them to your general stock inventory.

### EMPLOYEE TRAINING

- Annually train employees that handle (apply or mix/load) pesticides. Contact the Marin County Department of Agriculture for more information.
- Train employees on spill and runoff prevention, containment, cleanup, appropriate irrigation and scheduling, and waste management.
- Educate employees on how to properly identify common nursery pests and diseases, including beneficial insects.

### IRRIGATION

- Conduct general maintenance to manage leaks and ensure even delivery of water.
- Ensure overhead and impact sprinkler systems are set up to efficiently use water.
- Use check-valves to prevent line drainage and overspray on walkways.
- Use properly sized fogging/misting systems to prevent runoff.
- Use pulse irrigation if appropriate. Automatic timers/clocks allow for more complicated irrigation schedules such as pulsing, but check to ensure accuracy.
- Use containers with media/mixes having higher water holding capacity to reduce leaching and prevent runoff.
- Irrigate early in the morning to reduce evaporation during summer months and use on/off valves when hand watering.
- Install and use moisture sensors and automatic sprinklers when possible.
- Consider collecting rainwater from rooftops and downspouts for irrigation in dry months.

### DISPOSAL

- Ensure disposal, recycling, and plant debris areas are away from creek banks, waterways, drainage ditches and storm drains.
- Properly dispose of unwanted pesticide products/waste. Call the hazardous waste collection facility for instructions at 485-5648. (Novato businesses call 892-6395.)

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### STORAGE PRACTICES

- Provide secondary containment for chemical storage.
- Properly cover/protect potting soil, manure, and amendments during the wet season (Oct 1 – Apr 30), and during the dry season when rain is forecast.

### INTEGRATED PEST MANAGEMENT - IPM

- Promote Integrated Pest Management (IPM) practices. For example, remove plant pests, such as snails, by hand; dislodge aphids with a sharp spray of water; exclude mammals and birds by using fences, netting, and tree trunk guards; and pull weeds by hand. For more information, go to [www.birc.org](http://www.birc.org) or [www.ipminstitute.org](http://www.ipminstitute.org).
- Monitor pest populations. This will lead to early detection of problems before major damage occurs.

### PESTICIDE USAGE

- Read and follow instructions on use of product carefully. “More” is not “better”.
- Do not apply pesticides if fog or rain is forecast.
- Use non-toxic – or the least toxic – pesticides when possible, if a pesticide must be used. For examples, go to [www.OurWaterOurWorld.org](http://www.OurWaterOurWorld.org).
- Do not mix or prepare pesticides within 100 feet of any well, creek or pond.

### RESOURCES

- UC San Diego: Self-Assessment Checklist to see if you are meeting BMPs: <http://cesandiego.ucanr.edu/files/54193.pdf>
- Best Management Practices (BMPs) for Nurseries: <http://ucanr.org/sites/agwaterquality/files/121815.pdf>
- Marin County Stormwater Pollution Prevention Program - [www.mcstoppp.org](http://www.mcstoppp.org)
- Marin County Department of Agriculture – <http://www.marincounty.org/depts/ag>

### FERTILIZER USAGE

- Save money with mix/media testing and leaf analyses that can help better manage nutrients without over-fertilization.
- Use slow release or controlled release fertilizers.

### STORMWATER ORDINANCE

- Keep everything but rain water out of storm drains. All municipalities have local stormwater ordinances that require you to do so. For more information, go to [www.mcstoppp.org](http://www.mcstoppp.org).

### SPILL AND LEAK CONTROL

- Develop and maintain a spill response plan.
- Keep an adequate supply of spill cleanup materials where it will be readily available.
- Prevent materials from entering the sanitary sewer or storm drain when a spill occurs.
- Spot clean leaks and drips on a routine basis.

### PARKING AREAS AND WALKWAYS

- Use vegetation, gravel, pavers, etc. in place of impervious surfaces or heavily compacted soil.
- Routinely sweep up litter and debris to reduce the need to wash pavements, etc.

### ROOF RUNOFF

- Direct runoff so it won't flow across polluted areas where contaminants will be picked up and washed into storm drains.



MCSTOPPP wishes to thank the Marin County Department of Agriculture (415-473-6700) and the Marin County Division of Waste Management (415-473-6647) for their review of this fact sheet.

*If you are a person with a disability and require materials in alternative formats, please call 415-473-4381 (voice) or CRS 711 or email: [disabilityaccess@marincounty.org](mailto:disabilityaccess@marincounty.org)*