The Homeowner's Guide to Lawn and Garden Maintenance

pollution prevention tips to keep Nashville's water clean

Fertilizer

- **get a soil test** to determine optimum application rate
  - https://soillab.tennessee.edu/soil-analysis-2/
- use a low phosphorous and slow-release nitrogen fertilizer
- **do not apply if it's going to rain in the next 24 hours**
- store protected from rain water

Irrigation

- **water longer and less often** for deeper, drought-resistant roots
- water at night or in the early morning to avoid evaporation
- **use a rain barrel** to collect runoff for your plants
- adjust sprinkler heads to keep water off impervious surfaces like your driveway
- use a drip hose or soaker hose to water

Mowing

- do not throw yard waste into storm drains, ditches, street gutters, or channels
  - **recycle or compost yard waste**
- leave grass clippings on the lawn to fertilize and increase organic matter
- **encourage strong roots** by never cutting more than 1/3 of the leaf blade at a time

Pesticides

- **focus on mechanical controls** such as using fences, cultivating, and sprays of water
- look into cultural controls like changing irrigation practices that may encourage pests
- biological controls use natural predators to get rid of the pests
- **chemical controls should be a last resort**

What is Urban Integrated Pest Management?

an effective method of weed and insect control that uses the least hazardous methods possible

Insects

Weeds

Step 1 Prevent

- put your plants in the right spot, e.g. don't put shade plants in the sun
- don't let weed eaters or mowers hit tree trunks to **prevent damage**
- prune plants and space them correctly to **ensure air circulation**
- use plants like thyme and aster to **attract beneficial bugs**

- **create a weed barrier** with cardboard and mulch
- make sure your new plants don't have weeds growing in their nursery pots before you plant them
- follow the **good housekeeping** tips on page 2 of this guide

Step 2 Monitor

- **use insect traps** to catch bugs
- use identification guides to accurately **identify the insect**
- choose a control to **target your insect** specifically and avoid harming other insects, like bees

- use a plant ID app to **identify any new weeds**
- choose the right control based on your specific weed's life cycle
- **only try different controls if the previous one is not effective**

Step 3 Control

- **wash insects off** of plants with a garden hose
- prune bug infested branches
- **trap bugs** with pheromone attractants, bug zappers, baits, etc.
- **use natural predators**
- use chemicals like horticultural oils, insecticidal soaps, insect growth regulators, and botanical insecticides
- **use the least harmful chemicals possible**, such as silicon dioxide or boric acid instead of pyrethrin
- **read and follow the instructions for all chemicals**

- mechanically **pull out weeds**
- kill weeds with heat or boiling water
- **apply a mild toxicity, pre-emergent** that contains corn gluten or dithiopyr as soon as the first weed emerges
  - must be before soil temp reaches 55°
- apply a post-emergent to **target the specific weeds you have**
- **use the least harmful chemicals possible** such as iron HEDTA instead of 2,4,D
- **read and follow the instructions for all chemcials**

for specific questions, call MWS Stormwater at (615) 880-2420

Resources

Guide to Safe Pesticides and Garden Products
https://www.growsmartgrowsafe.org/

Integrated Pest Management
http://www.ipm.ucdavis.edu/

Tennessee Smart Yards
https://tnyards.utk.edu/

Agrilife Extension
http://ipm.tamu.edu/

Southern Integrated Pest Management Center
http://www.sripmc.org/

Tennessee Native Plant Society
https://www.tnps.org/

Tennessee Native Plant Database
https://tynnativeplants.wordpress.com/

Tennessee Garden Clubs
https://www.tngardenclubs.org/

Davidson County Master Gardeners
https://mgofdc.org/

Insect Identification Guides
https://www.insectidentification.org/
https://ento.psu.edu/outreach/extension/insect-image-gallery