Homeowners Guide to Lawn and Garden Maintenance:

Pollution Prevention Tips to keep creeks, streams and rivers clean
**Fertilizer**
- Get a soil test to determine optimum fertilizer application rate, to avoid over fertilization.
- Use a low phosphorous fertilizer.
- Use a slow-release nitrogen. Usually about 1 lb./1,000 square ft. This prevents nutrient runoff to creeks.
- Do not apply if rainfall is forecast in the next 24 hours. All the fertilizer will wash into the creeks.
- Store fertilizer in covered locations away from rain water
- The UT Soil, Plant & Pest Center will test soil for a small fee- [Http://soilplantandpest.utk.edu/](http://soilplantandpest.utk.edu/)

**Irrigation**
- Water less often, but for longer time. It will make roots grow deeper and become more drought resistant.
- Water only at night or early morning so less water evaporates into the air
- Use a rain barrel to collect water and release it on plants in a drought
- Adjust sprinkler heads so spray will not contact impervious surfaces
- Use a drip hose or a soaker hose to water, instead of a traditional sprinkler.

**Mowing**
- Never remove more than 1/3 of the leaf blade at a time.
- Do not throw yard waste into storm drains, ditches, street gutters or channels. It will eventually end up in a creek or clog a pipe.
- Leave grass clippings on the lawn. They return a small amount of fertility and contribute organic matter to the lawn.

**Pesticides**
- Mechanical and cultural controls
- Biological Control
- Chemical control
Integrated Pest Management is an effective method of weed and insect control that incorporates the least hazardous methods possible to reach the goal.

**Insects & Disease**

**Step 1: Prevent the insects**
- Pick the right plant/tree for the right spot. For example, don’t plant shade trees in the sun.
- Prevent damage to plants. Don’t let mowers or weed eaters hit tree trunks.
- Properly prune plants and space correctly for air circulation.
- Plant beneficial bug attractants like spearmint, thyme, and aster.

**Step 2: Monitor the insects**
- Use insect traps to catch the bugs and accurately identify them.
- Choose the right control to specifically target your pest so it won’t kill other useful bugs, such as bees.

**Step 3: Control the insects**
- Mechanically wash insects off plants with a garden hose. Prune out diseased/bug infested branches.
- Trap bugs with products like pheromone attractants, bug zappers, and baits.
- Use biological controls like natural predators (Bacillus thuringensis, green lacewing).
- Use chemicals like horticultural oils, insecticidal soaps, insect growth regulators, botanical insecticides.
- Use the least harmful chemical possible such as silicon dioxide or boric acid instead of pyrethrins.

**Weeds & Disease**

**Step 1: Prevent the weeds**
- Use weed guides to correctly identify the weed and learn about the life cycle.
- Choose the right control for the specific weed you have.
- Follow the irrigation, mowing, and fertilization techniques mentioned on page 2.

**Step 2: Monitor the weeds**
- Use weed guides to correctly identify the weed and learn about the life cycle.
- Choose the right control for the specific weed you have.

**Step 3: Control the weeds**
- Mechanically pick weeds out.
- Destroy weeds with heat, boiling water, or bleach.
- Apply a mild toxicity pre-emergent that contains corn gluten or dithiopyr, as soon as the first weed emerges. Definitely before March 15th & before soil temp. reaches 55°.
- Apply post-emergent chemicals that target the specific weeds you have. For example, don’t apply a broadleaf weed killer to kill crabgrass.
- Use the least harmful chemical possible. For example use a herbicide to kill broadleaf weeds with iron HEDTA instead of 2,4,D.
Most supplies can be found at a local hardware store or gardening center. Insect growth regulators and beneficial bugs can be purchased on-line.

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

Integrated Pest Management On-Line  
http://www.ipm.ucdavis.edu/

Univ. of Tennessee IPM Information  
http://web.utk.edu/~extepp/ipmprog.htm

Integrated Pest Management Tips  
http://www.colostate.edu/Depts/CoopExt/4DMG/PHC/integrat.htm

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

IPM Program in Connecticut  
http://www.hort.uconn.edu/ipm/

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

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

The Garden Club of Nashville  
http://www.gcnashville.org/

Davidson County Master Gardeners  
http://www.dcmg.org/

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

Weed Identification Guide  
http://www.tennesseeturfgrassweeds.org/PAGES/wit.aspx