

# WHAT YOU SHOULD KNOW WHEN OPERATING A LAWN MAINTENANCE BUSINESS IN BROWARD COUNTY

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## INTRODUCTION

This Best Management Practice Guide is intended for the companies that provide lawn maintenance services in Broward County. These companies are responsible for mowing, fertilizing, pesticide and herbicide application, and the health of many lawns in South Florida. Some companies have maintenance/storage areas where pesticides are loaded into application equipment; mowers and other pieces of equipment are serviced; and pesticides, fuel, fertilizer, and cleaning solvents are stored. Other small companies do not have a maintenance/storage area and therefore load, clean, and service equipment on the road or at a job site.

Whatever the case may be, the maintenance/storage area or the job site area is where the soil, surface water, or ground water is likely to become polluted. For example, contamination can occur when pesticides spill or rinse water is allowed to run to the ground or surface water during application and equipment cleaning processes. Poor handling and disposal practices at a maintenance/storage site or job site can lead to environmental problems. These environmental problems can expose your lawn maintenance company to extensive legal liability for contamination and cleanup including penalties and fines, and can create a poor public image.

Contamination also occurs when companies overuse fertilizers, pesticides, and herbicides. Management practices should be implemented to prevent the contamination of soil, surface water, and ground water at the maintenance/storage site or the job site. South Florida's yards are unique in that they are pathways to our waterways. The products used to aid lawn and landscape in our yards could - with the help of rainwater - end up in our canals, rivers, and ultimately the ocean. The health of South Florida's estuaries, rivers, lakes and aquifer depends in part on proper lawn care and landscape maintenance.

When rain falls on yards, roads, and parking lots, storm water runoff occurs. Pesticides, herbicides, fertilizer, petroleum, and other like products are all carried into our waterways through storm water runoff. This is why it is important to use products such as fertilizers and pesticides sparingly and in accordance with the label. Scientists have discovered that fertilizers and pesticides from residential areas can be serious threats to the health of Florida's waterways. When runoff containing nitrogen from fertilizers flows to a waterway, algae can become so abundant that aquatic plants are smothered and oxygen is depleted causing fish kills.

## PESTICIDES

All pesticide products must be registered with the Environmental Protection Agency (EPA) as required by the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). By law, all applicators - whether professionals or amateur gardeners - must follow the label directions. The label will state exactly how the product is to be used: the hazards, the ingredients, whether protective clothing is required when using it, and storage directions.



**It is a violation of federal and most state laws to use pesticides in a manner that is inconsistent with the label.**

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## STORAGE

Pesticides should be stored separately from fertilizers in a locked concrete building on plastic or reinforced metal shelves. Do not keep pesticides on wood shelves. Wood will absorb pesticides in case of a spill. Automatic exhaust fans and an emergency wash area are recommended in these storage areas. Personal protective equipment should be easily accessible and stored immediately outside of the pesticide storage area. Also, an inventory of the pesticides stored and the Material Safety Data Sheets (MSDS) to all chemicals used should be kept in an accessible area on the premises. Employees should be notified of the availability of MSDS.

Flammable pesticides should be separated from nonflammable. Dry bags should be raised on pallets to ensure that they do not get wet. Liquid materials should always be stored below dry materials, never above them. Labels should be clearly legible. Herbicides, insecticides and fungicides should be separated to prevent cross contamination and minimize the potential for misapplication.

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## **APPLICATION**

As a courtesy to neighbors, the Cooperative Extension Service encourages you to post a sign if you apply any pesticides to lawns or landscape plants. The best management practice for pesticide is to use it in accordance with the label instructions for that pesticide. If a pesticide is not used as recommended by the label, it may harm children, pets, and even adults through skin contact, inhalation or ingestion. Wash water from pesticide application equipment must also be managed in the same way as the pesticide. When using pesticides remember the following:

1. Use pesticides in accordance with label to avoid overuse.
2. Pressure rinse or triple rinse empty containers and then transport them to an approved pesticide container recycling facility. If no recycling facility is available, dispose of as solid waste.
3. Dispose of rinse water and containers used to collect spills or leaks as waste. Pesticide-contaminated water and materials should be disposed of at an approved waste disposal site.
4. Treat for specific pest problem and only treat the infested areas.
5. Protect the beneficial insects in lawns or landscapes by avoiding blanket applications of pesticides. Beneficial insects such as lady bugs, lacewings, and parasitic wasps help to control pests naturally.
6. Avoid using broad-spectrum pesticides because they also kill beneficial insects.

## **ALTERNATIVES TO PESTICIDES**

You can effectively eliminate or control some pest problems by handpicking, pruning or spraying with water. Many pest problems can be reduced or eliminated by removing a few affected leaves or plant parts. Safer alternatives to traditional, chemical pesticides include insecticidal soaps, horticultural oils, and products containing a bacterium called *Bacillus thuringiensis*. Call the Cooperative Extension Service for more information on alternative pest control. The Department of Planning and Environmental Protection (DPEP) has also produced several brochures with alternative methods to pesticides including Common Sense Pest Control and Home Brewed Pest Control.

## **FERTILIZERS**

Store fertilizers separately from solvents, fuels, and pesticides. Fertilizers are oxidants and can accelerate a fire. Fertilizers should ideally be stored inside of a concrete building or in an area that is protected from rainfall. Take precautions when storing fertilizer to prevent contamination of nearby ground and surface water. Fertilizers should always be stored in an area that is protected from rainfall. Secondary containment of liquid fertilizer tanks larger than 550 gallons is addressed in 62-762 Florida Administrative Code (F.A.C.). Even where not required, the use of secondary containment is a best management practice.

Use fertilizer in accordance with the label. All fertilizers may burn if improperly applied. Also, always apply fertilizer when grass blades are dry and water thoroughly after each application. It's important to fertilize the soil in South Florida because of its infertile and sandy nature. A basic fertilizer that contains slow-release nitrogen and other essential nutrients is the most environmentally-safe and cost-effective alternative. At least 30 percent of the nitrogen in the fertilizer should be listed as slow release.



There are usually three numbers on a fertilizer package: 6-6-6, 15-0-15, 16-4-8, etc. The first number represents the nitrogen percentage, the second number represents phosphorus, and the third represents potassium. It is best if the first and third numbers (nitrogen and potassium) are the same. Naturally, phosphorus rich soil exists in most parts of Florida, therefore you may not need to apply a fertilizer with phosphorus. To help reduce runoff pollution, use this rule of thumb whenever possible. Apply one-half pound nitrogen per 1000 square feet when fertilizing lawns. Calculate by dividing the first number on the fertilizer bag into 50. Example: For 16-4-8,  $50/16=3$  pounds fertilizer per 1000 square feet.

## **GASOLINE, DIESEL FUEL**

Fuel dispensing areas should be designed and managed to prevent soil and water contamination. Concrete surfaces should be provided near the fuel pumps. The pumps should not be located where a spill or leak would cause fuel to flow onto the ground or into a storm drain or surface water body.

Fuel storage tanks should be in compliance with DPEP's storage tank rule (Article X of Chapter 27 Broward County Code). In general, underground tanks with volumes over 110 gallons and above-ground tanks with volumes over 550 gallons must be registered and located within secondary containment systems. The best practice is for above-ground tanks with over 550 gallons capacity be roofed to keep out rainfall. If the structure is not roofed, then water that accumulates must be managed properly.

For example, excess water to be discharged must always be checked for contamination. This can be done by looking for an oil sheen, observing any smell of fuel or oil, or through the use of commercially available test kits. Never discharge any water that is contaminated. Contaminated water must be treated on site using commercially available treatment systems, or discharged to an off-site treatment system. If excess water is not contaminated, it can be discharged to a stormwater system, retention area, or grassy swale.



It's also important to note that any facility where hazardous materials of 25 gallons or more per month are stored, handled, generated, used, processed, manufactured, disposed or are otherwise present is considered to be a hazardous material facility. All such facilities are required to have a hazardous materials license by the DPEP. To obtain a hazardous material license, call 954-519-1414.

## GRASS CLIPPINGS

Never dump grass clippings or other yard waste into storm drains or waterways. Such activities are illegal, contribute to the degradation of the water quality in our local waterways, and can also clog storm drains. Also, dumping grass clippings on roadways or open lots pollutes soils and eventually ground water. **The Broward County Code prohibits any discharges that cause pollution to the natural resources within the County.** Leave grass clippings on the lawn to decompose and provide nutrients to grass roots. Grass clippings can also be mixed with leaves and twigs to create a useful mulch that provides nutrients to plants. When it is not feasible to leave grass clippings on lawns because of disease, excessive weeds or pest problems, dispose of it properly at a licensed waste disposal site.

## MOWING

The way that the grass is mowed has a significant effect on the health of the lawn. Although different turf types have different growing heights, cutting grass too short is extremely harmful and can encourage certain varieties of weeds. In fact, longer grass is protected from the hot summer sun and trampling feet. Higher grass also prevents weeds by choking them out as they try to sprout. When mowing, keep in mind that most St. Augustine and Bahia turf grass should be kept at a minimum height of 3 to 4 inches and longer in the shade. Centipede and Bermuda turf grass should be mowed at 1 1/2-2 inches.



Grass blades produce some of their own nutrients, a process which can be interrupted by mowing too closely. Each mowing should remove no more than one-third of the leaf blade, and those cuttings should remain on the lawn to decompose and nourish the soil. Grass suffers the least amount of damage when mowed during the cooler parts of the day. Be sure to cut grass with sharp lawn mower blades. Grass flourishes more when it's sliced evenly, whereas chopping or shredding the tops of the blades leave them more prone to sun damage, insects, and diseases.