

REMEMBER

In Broward County, our storm water management system has to meet the needs of nearly 1.7 million residents. The canals and the surface water management features work together to make Broward County a safe and healthy place to live. Broward homeowners collectively have a great influence over the quality of storm water. We hope this Best Management Practices brochure has given you some ideas on how you can be a part of the team to restore the Everglades and meet Broward's future urban water needs.

This brochure is intended to get you started. More information can be found at the following Web sites.

www.broward.org/naturescape
www.broward.org/watermatters
www.sfwmd.gov/browardbmps



LANDSCAPE BEST MANAGEMENT PRACTICES FOR BROWARD COUNTY



Board of County Commissioners
Sue Gunzburger • Dale V.C. Holness • Kristin D. Jacobs
Chip LaMarca • Ilene Lieberman • Stacy Ritter
John E. Rodstrom, Jr. • Barbara Sharief • Lois Wexler

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BMPs

LANDSCAPE BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) are guidelines for landscape maintenance that keep landscapes visually attractive while conserving our water resources, reducing pollution and protecting our fragile South Florida environment. In Broward County, landscape BMPs are part of the "NatureScape Broward Initiative." By using the proper irrigation, fertilization, and mowing techniques recommended by NatureScape, as well as proper plant selection, urban landscapes can better coexist with the natural environment.

WHY DO WE NEED BMPs?

Over the last 60 years, Broward County has transformed from a rural community to a highly populated urban center. Completed in the 1960s, the Central and Southern Florida Flood Control Project was responsible for draining many areas of Broward, which resulted in increased agricultural production and population growth. Today, the eastern one-third of land area in Broward County is predominantly urban, while the western two-thirds of the County remains Everglades.

Land use transformations have greatly impacted our urban environment and the Everglades. Impervious surfaces such as roads and parking lots decrease the land's ability to absorb, filter, and store rain water, which recharges our drinking water supply. Also, some of our current methods of maintaining our urban landscaping, including over-watering, over-fertilizing and planting invasive species have resulted in negative environmental impacts.

SOURCES OF POLLUTION

When it rains in Broward County, pollutants and contaminants such as phosphorus-rich fertilizers, pesticides, herbicides, oils, and grease, wash off roads and other hard surfaces and are carried by storm water into ponds and canals. To provide flood control, storm water may need to be pumped from canals directly into the Everglades. Contaminants in stormwater "run off" end up in our waterways, the ocean and, possibly, our drinking water. Unfortunately, there are no processes to effectively filter out all of the phosphorus and other pollutants before they reach the Everglades and other receiving waters.

PHOSPHORUS IMPACTS

You hear a lot about phosphorus in the Everglades. Phosphorus negatively impacts the Everglades by upsetting the ecological balance of aquatic plants. Aquatic plants native to the Everglades thrive under low phosphorus conditions. Most other plants are not adapted to grow under these conditions. However, once phosphorus is introduced into the Everglades, other plants, such as cattails, are able to grow at faster rates. As a result, plants that once naturally dominated the Everglades are being crowded out by these fast growing invasive plants.



Help conserve our water resources, reduce pollution, and increase the beauty of yard landscaping

WHAT YOU CAN DO TO HELP...

IRRIGATION MANAGEMENT

Proper irrigation is key to Best Management Practices for healthy landscapes and waterways. It is estimated that we each use from 25 percent to 50 percent of our water for irrigation. Over-watering favors the growth of water-loving weeds and pests and also creates runoff, which may carry fertilizers, herbicides and pesticides from yards into nearby waterways.



Most irrigation problems are maintenance related, not based on design deficiencies. With

nothing more than a tune-up, the vast majority of irrigation systems can generate large water savings. In some instances, adjusting the distribution and timing of sprinkler operations, will result in more efficient irrigation and significant water savings.

Watering Tips:

- Avoid watering impervious surfaces such as your driveway.
- Check sprinklers twice a month to ensure sprinkler heads are in good repair.
- When not under water restrictions, limit irrigation to just twice per week in the summer and once per week in the winter - this will stimulate the development of a deep root system and increase drought resistance.
- Water your lawn early in the morning and deeply (3/4 - 1 inch of water per week).
- Add a rain shut-off device to your sprinkler system, or use a rain gauge and turn off your system when the lawn has received 3/4 to 1 inch of rain.
- Signs that your grass needs water include the leaf blades folding and/or wilting. Then, irrigate in accordance with current local water restrictions.

FERTILIZER MANAGEMENT

Turfgrass is Florida's largest crop, with 65 thousand acres in Broward County alone. While a lush green lawn adds aesthetic value to your property, the methods used to achieve the "green look" have raised environmental concerns. One of these methods is the use of fertilizers that contain phosphorus, which has been identified as a major pollutant in the Everglades. Experts agree that in South Florida, the soils are sufficiently rich in phosphorus, so that additional phosphorus is not required to support plant growth. However, most fertilizers on the market contain a combination of nitrogen, phosphorus and potassium. On the left is a bag of fertilizer labeled with its nutrient concentration in percentile form. In other words, the first number



(15 percent), the middle number is phosphorus (0 percent), and the last number is the potassium concentration (15 percent). For example, a 25 pound bag of fertilizer labeled 15-0-15 would contain approximately 3.75 pounds of nitrogen, 0 pounds of phosphorus, and 3.75 pounds of potassium. Homeowners can assist in Everglades restoration by selecting slow release fertilizers low in phosphorus and by limiting fertilizer application, as well as following careful methods of application when needed. This will reduce the amount of phosphorus that can potentially impact our waterways and the Everglades.

Fertilizing Tips:

- Use a slow-release fertilizer with low or no phosphorus (with a middle number two or less, such as 13-0-13).
- Apply fertilizer using smaller applications rather than a large, single application. Follow the label. The label's the law.
- Postpone fertilizing when more than 1 inch of rain is expected.
- Use a tarp under the spreader when filling or emptying to prevent spills. Make sure fertilizer does not fall onto sidewalks or impervious surfaces during application. If this happens, sweep granular fertilizer onto the lawn, NEVER hose it off.
- Do not apply fertilizer on lawn areas within 10 feet of water's edge.

2 percent Phosphorus or Less is Best

NATURESCAPE

NatureScapes are "Florida Friendly" yards and landscapes that conserve and protect water quality by using many of the landscape BMPs discussed in this pamphlet. NatureScapes use native and drought tolerant plants, and reduce stormwater contamination caused by excessive use of pesticides and fertilizers. They provide food, water and shelter for resident and migrating wildlife from birds to butterflies. NatureScapes use integrated pest management practices, and recycle yard waste into mulch and compost. NatureScape Broward recognizes yards certified through the National Wildlife Federation and/or through the Florida Yards and Neighborhoods program.

NatureScape Tips:

- Conserve water by using native plants.
- Make sure plants are properly placed with respect to sunlight, drainage, irrigation and space requirements.
- Make sure the people you hire to care for your yard are licensed professionals.
- Use integrated pest control practices.
- Recycle yard waste into mulch and compost.
- Over-watering creates opportunities for fungus and disease.

VEGETATION MANAGEMENT

Maintaining a healthy vegetative cover will reduce the amount of phosphorus, nitrogen and other nutrients and pollutants from entering the Everglades. A thriving native landscape conserves water and reduces pollutant loads entering water bodies.

Vegetation Management Tips:

- Mow at the recommended height for your grass species. Maintain St. Augustine and Bahia at 3-4 inches, Bermuda at 0.5-1.5 inches, and Centipede at 1.5-2 inches. This produces a lawn with better tolerance to environmental stress.
- Mow frequently, as a general rule, once per week.
- Try not to remove any more than one-third of the grass blade per mowing.
- Practice "grasscycling," or mulching by leaving clippings on the ground.
- Make sure grass clippings do not blow into water bodies or onto impervious surfaces such as sidewalks

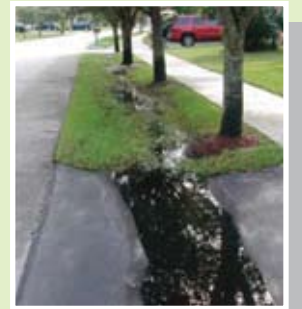


- Properly prune trees annually or as needed.
- By following a proper irrigation regime you can reduce the need for weed control.

STORMWATER MANAGEMENT

Managing storm water to prevent or limit flooding is a constant challenge. Your neighborhood surface water management system typically includes SWALES, DITCHES, RETENTION/DETENTION PONDS and NEIGHBORHOOD CANALS. This system is designed to provide not only flood protection, but water quality treatment for your community. It is important that property owners are familiar with their surface water management system and its maintenance. This is especially important during south Florida's wet season – from June through November.

Swales are one of the most common ways of moving and cleaning storm water in our neighborhoods. A swale is a depression in your lawn, which varies in depth from 6 inches to a few feet. Swales retain and treat storm water runoff by providing a filter for contaminants and pollutants, and also provide drainage by allowing water to soak into the ground or flow into inlets and canals.



Storm Water Management Tips:

- Remember when water ponds in your swale, the swale is doing its job.
- Keep swales mowed and clear of blockages.
- Filling in swales will affect the ability of your property and your neighbor's property to drain. It is also illegal.
- Keep areas around canals and ponds open and clear of fences and other structures so they are accessible for maintenance.
- Get approval before planting trees and shrubs along canals and waterways.
- Keep storm drains free of debris and vegetation.
- Never put chemicals, fertilizers, pesticides, lawn clippings, soil or other debris down storm drains– today's stormwater may be tomorrow's drinking water.