

PRISM



PERSONAL RESPONSIBILITY FOR ISLAND STORMWATER MANAGEMENT



Town of Fort Myers Beach

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**Think
Globally,
Act
Locally,
RECYCLE!**

*We've all seen litter scattered alongside a roadway.
Do you know how long it will take to decompose
to a non-recognizable form?*

| | |
|------------------------|------------|
| Styrofoam | Never |
| Aluminum | 80-100 yrs |
| Plastic bags | 10-20 yrs |
| Plastic coated cartons | 5 yrs |
| Plastic containers | 50-80 yrs |
| Cigarette butts | 10-12 yrs |
| Leather shoes | 25-40 yrs |
| Vibram soles | 50-80- yrs |
| Wool socks | 6-24 mo |
| Orange peels | up to 6 mo |
| Paper containers | 2-5 mo |

“Please Don’t Litter”

The PRISM Program presents this guide to show how an individual can minimize personal pollution of stormwater. It is essential that all of us take part in protecting our water systems. Just a few simple changes can help keep our waterways healthy.

Water flowing over yards, driveways and streets during and immediately following rainstorms carries silt, car fluids, pesticides, nutrient-rich (nitrogen and phosphorus) fertilizers, leaves and litter into storm drains and waterways. This is called stormwater runoff. Eroded soil muddies the water by adding excess sediment to water bodies. Discharges of excess nitrogen and phosphorus from fertilizers stimulate algae and plant growth beyond natural levels disrupting the balance of aquatic life.

A water-friendly yard reduces the volume of stormwater runoff and is designed to filter pollutants, helping to keep them from reaching the Gulf, Estero Bay and island lakes.

Each of us can have a major impact on local water quality by simply **Slowing the Flow** of water exiting our yards.

Slow the flow of water from your yard

Slowing the flow of stormwater runoff provides time for soil to filter silt, fertilizers and pesticides. This helps to assure that water reaching storm drains and waterways is clean. The following practices help slow the flow.

- *Examine the Lay of Your Land.* Where does the water flow? Collect? Runoff? Non-absorbent surfaces (roofs, driveways, lawn) will have water flowing from them.
- *Minimize Erosion - Keep Your Yard at Home.* Minimize soil erosion by planting groundcovers and by creating mulched beds on bare areas or places where grass is hard to grow. No yard should have bare ground, which is the most vulnerable to erosion. Biodegradable straw or jute matting can be laid on bare trouble areas to stabilize soil until plants can get established.
- *Create Mulched Beds.* Well-mulched beds can reduce the need for fertilizing, watering, mowing and pesticide use, making your yard easier to manage and keeping it from eroding. Think about adding more mulched beds to further the ability to slow the flow and absorbing excess water. Mulched beds are attractive and take far less time and money to maintain than grass.
- *Plant a Rain Garden.* Rain gardens are low spots landscaped with flowers and other moisture-tolerant plants to replace areas of lawn or bare ground and make a lovely solution to pollution. Rainwater collected from your roof, driveway or lawn is conveyed to this low spot where it gathers and drains, slowly filtering into the ground. Compared to a conventional

lawn, rain gardens absorb about 30 percent more water. Contact Fort Myers Beach Town Hall or visit www.fortmyersbeachfl.gov for more information on rain gardens.

- *Build Berms and Swales.* Berms are raised earthen areas covered with vegetation that can be located to direct stormwater flow to areas that can use it. Swales are shallow, landscaped conveyances that allow water to be filtered and to percolate into the ground.
- *Terrace a Slope.* A sloped area that is too steep for a berm or a swale may be terraced with two or more flat terraces. On Fort Myers Beach where the general elevation does not vary much, a sloped terrace can be created to further help direct flow to identified areas of your property and create an attractive landscape feature.
- *Save Your Rainwater.* Rain barrels and cisterns can save roof water for future watering needs, filling fountains and bird baths, rinsing and washing tools, and to wash the car. (Never use collected rainwater for human or pet consumption.) Contact Fort Myers Beach Town Hall or visit www.fortmyersbeachfl.gov to find out when the next rain barrel workshop is scheduled.

Protect Your Shoreline

All of us on Fort Myers Beach live near a shore of a waterway. Your stewardship is especially important. Vegetation helps to filter sedimentation from stormwater and, to a lesser degree, filter pollutants before they reach the water. Avoid a manicured lawn all the way to the edge of the shoreline as it provides little filtering action. Consider a “no-mow” zone along the water’s edge by establishing a buffer zone of plants. Lawn fertilizer, weed killers and other pesticides can easily wash directly into the waterway. A berm/swale system along the shoreline can be used to slow the flow of stormwater runoff and give more time to soak into the soil. Biodegradable straw or jute matting can stabilize the area until plants can grow. Visit www.dep.state.fl.us/water/nonpoint/index.htm for the Waterfront Property Owners Guide from the Florida DEP or call 850-245-7508.)

Keep Your Yard at Home

A healthy yard and garden begins with healthy soil. Soil has its own ecosystem and it should be teeming with life. Loose, porous soil slows the flow by absorbing and holding more water. It encourages plant growth by allowing water to reach plant roots. Soil compacted during construction or by heavy foot or vehicle traffic loses its porosity. A simple percolation test can test your soil’s porosity: Remove both ends from a 46 oz. can and mark a line two inches from one end. Pound the can into the soil so the line is level with the surface. Pour one quart of water into the can and time how long it takes to drain into the soil. (Less than 2 minutes = excellent, from 2 – 8 minutes = somewhat

compact or dense soil, more than 8 minutes = overly compact with little water absorption). To correct overly compact soils: keep people, cars and bikes on designated paths. On lawns leave grass clippings and in gardens add leaves, mulch and compost.

Fertilizing Your Yard: Less is Best

Fertilizers can become pollution that disturbs the natural balance in waterways and leads to an explosion of plant and algae growth.

- *Read the Label.* All bags of fertilizer list three numbers (e.g. 15-0-15). The first is percentage of nitrogen, the second is phosphorous, and the third is potassium. Watch out for the phosphorous!
- *Phosphorous – You Don't Need It!* Phosphorous only benefits flowering plants and is a waste of money on a lawn. Most local soils are phosphorus rich and do not need it added.
- *It is Okay Not to Fertilize Lawns at All.* Most lawns draw nutrients they need from clippings. Fertilize only in response to a determined need.
- *Make Sure Half of Nitrogen is Slow-Release or Water Insoluble.* Slow-release is less likely to wash away. Apply no more than one pound per 1,000 sq. ft. of lawn.
- *Avoid Rain When Fertilizing.* Fertilize only once or twice a year and avoid the rainy season. Never fertilize before a storm. The fertilizer will wash away. Always water-in the fertilizer with $\frac{1}{4}$ - $\frac{1}{2}$ inch of water.
- *Keep Fertilizer Away From Waterways.* If your lawn borders a waterway, keep fertilizer far away from the water unless you want your clear water to turn a slimy green.
- *Mature Shrubs and Trees Don't Need Fertilizer.* Fertilize new plantings only as needed. Mulch reduces fertilizer needs.
- *Remember,* impervious surfaces like sidewalks, streets, and driveways do not need fertilizing and anything that lands there will be washed off to our water bodies with the next rain.

Use Pesticides Carefully.

An over-watered, over-fertilized lawn is weak and attracts bugs. If you have a pest problem carefully identify the bug, then use the least toxic pesticide available to treat it. These include insecticidal soap, horticultural oil, and Neem oil. Treat only affected areas in dry and calm weather.

Choose Native Plants.

Native plants require less water, less fertilizer, less pesticides and less attention. There are several native plant nurseries in SW Florida. Check the phone book for their listings. Many organizations hold periodic native plant sales; watch the newspaper for schedules.

Create Mulched Beds.

Mulch is organic material applied to the soil surface to protect or improve an area. Mulch enriches soil making it fluffier to hold more water. Mulch is essential.

- Pile a 2 – 4 inch layer of organic mulch in a designated area and plant your plants. Make your own mulch with leaves, wood chips, pine needles, grass clippings and chopped leaves from the mower bag. Avoid non-renewable mulch such as cypress. Try melaleuca or pine bark. When you rake leaves, throw them in the beds or share with neighbors.
- One large mulch bed is better than several small ones. Join trees together in one large bed. Group plantings in large beds. A single tree needs the bed 2 feet in diameter for every 1 inch of trunk diameter.
- Under shade trees where grass won't grow well, allow leaves to collect for self-mulching. Leave a space against the trunk for air to circulate.

NOTE: The Florida Native Plant Society advises against using cypress mulch. Many valuable cypress trees are destroyed for the sole purpose of creating a mulch product. Debate is ongoing about the effectiveness of cypress products as mulch. On the other hand, pine bark mulch is a by-product of pulp production.

Mowing Practices for a Healthy Lawn

Reduce grassy areas with mulch beds. It's less work! Maintain the correct grass height. Remove no more than a third of the blade at a cutting. Longer grass has a stronger root system and helps to slow the flow of runoff. Mow when dry to discourage the spread of disease. Frequent mowing with the correct blade height helps control and kill many weeds by preventing reproduction (no seeds). Sharpen mower blades monthly if possible, to prevent shredding of grass that opens it up to disease. Leave the grass clippings on the lawn to decompose (unless the grass has a fungal disease).

(CAUTION: Never sweep or blow debris into a storm drain or swale. These areas need to stay clear for water storage or drainage.)

Water Efficiently

Your lawn needs watering when you walk on it and can leave footprints, when 50 percent of the leaf blades are folded in half, or the lawn color looks blue-gray. The best time to water is between 4 AM and 7 AM when there is less evaporation due to wind and temperature. Avoid watering from 10 AM to 4 PM. Water evenly. Over-watering increases erosion and runoff, encourages fungal growth, and compacts soil limiting root growth. Don't water on a schedule. Water when needed! Delay watering a few days ahead of rain as soil will absorb more. Established plants and shrubs seldom need watering.

Other Recommendations: In addition to the yard practices you've read about in this guide, the PRISM Program recommends these important measures:

- Control or eliminate pet waste, especially near roadways, sidewalks and water bodies.
- Wash vehicles, rinse and flush boats on pervious surfaces.
- Don't lose a drop when changing oil or adding fuel to your vehicle or lawn mower.
- Provide plants, groundcovers or brush piles for birds, butterflies and other wildlife.
- Eliminate exotic, invasive plants.

Additional Resources

- Lee County Extension Service Office: 239-533-7515
- Best Management Practices for Protection of Water Resources in Florida, Florida Green Industries, June 2002 (available at your County Extension Service).
- A Guide to Environmentally Friendly Landscaping – Florida Yards & Neighborhoods Handbook, 3rd ed., University of Florida IFAS Extension, 2006 (available at your County Extension Service).
- Waterfront Property Owners Guide. Florida Dept. of Environmental Protection, December 2001 (available from the FL-DEP Nonpoint Source Management Section at 850-245-7508).

NOTE: The above three publications can be downloaded at www.dep.state.fl.us/water/nonpoint/pubs.htm

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