Be Wise if You Fertilize

Protect

Sanibel's Waters

Working Together to Protect

Sanibel's Waters

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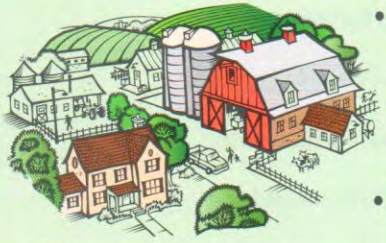
Introduction

In recent years, nutrient concentrations in the waters surrounding Sanibel have risen dramatically. These excess nutrients have resulted in massive algae blooms that have covered our seagrasses and blanketed our beaches. The result: our ecology, economy and way of life are at risk.

The City of Sanibel is committed to reducing nutrient pollution in area waters. This is a challenging task. Massive freshwater releases from Lake Okeechobee, agriculture and urban development along the Caloosahatchee River, poorly maintained septic systems, and discharges from wastewater treatment plants all contribute nutrients to our local watershed.

Nutrients also come from sources closer to home.



- Studies have found that on a per acre basis, American homeowners use ten times more chemical fertilizers and pesticides than farmers use on agricultural land!
- According to the Florida Department of Agriculture and Consumer Services, the sale of residential fertilizer in the Caloosahatchee region increased 62% from 2003 to 2006.

Fortunately, there are simple ways that we can reduce our personal contribution to nutrient pollution. This brochure explains the Sanibel Fertilizer Ordinance, including selecting the right fertilizer and when, where, and how to apply fertilizer properly to protect the environment.

Most City property is already "fertilizer-free". Recently, the City of Sanibel also discontinued the use of fertilizers on the City ballfield. Imagine the improvements we can experience when our entire community gets involved.

Sanibel's Fertilizer Ordinance—Brief Summary

While not the only source of excess nutrients in our local waters, reducing our personal contribution to pollution is an important step in improving water quality.

For those who choose to fertilize, the Sanibel Ordinance requires the use of slow release nitrogen and low phosphorus fertilizers.

From October 1 through June 30, the following conditions apply to fertilizer use:

Content

Nitrogen

Total Nitrogen = 20% or less AND
Slow Release Nitrogen = 50% or more

Phosphorus

Total Phosphorus = 2% or less

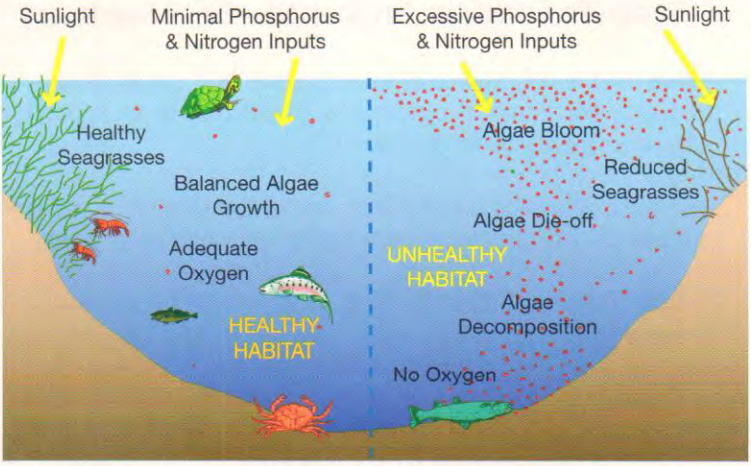
Application

- Up to one pound of nitrogen per 1000 square feet per application
- Up to 4 pounds of nitrogen per 1000 square feet per year
- Up to 6 applications per year

Fertilizers containing nitrogen and phosphorus CANNOT:

- Be applied during the rainy season (July 1 through September 30)
- Be applied within 25 feet of a body of water (See page 8)
- Be applied to impervious (hard) surfaces, such as roads, driveways and sidewalks
- Be dumped into a storm drain

Note: These restrictions do not apply to products containing secondary or micronutrients only.



Fertilizer runoff adds excess nitrogen and phosphorus to the water, stimulating algae growth. Algae blooms may reduce oxygen levels and block needed sunlight from reaching seagrass communities. Resulting losses in habitat and fish populations can be catastrophic. We can all be a part of the solution to stop this devastating cycle.

To Fertilize or Not to Fertilize

What is fertilizer, anyway?

All plants require certain chemical elements, or nutrients, for proper growth and appearance. Most of these elements are obtained from the soil and absorbed by plant roots. If inadequate nutrients are available in the soil, plant growth and quality may be limited. As a result, fertilizers may be used to make up for those nutrients lacking in the soil. A complete fertilizer contains the three primary nutrients—nitrogen (N), phosphorus (P), and potassium (K). It may also contain additional secondary and/or micronutrients.

Right Plant, Right Place

One of the best ways to reduce, or even eliminate, fertilizer use is to plant native species. Many of the native plants here have adapted to local conditions over thousands of years. Planted in the right location, these plants are amazingly adept at surviving without any help from

fertilizers. Plus, they'll require less water too. A list of Sanibel's horticulturally available native plants can be obtained from the City's Department of Natural Resources or on the City of Sanibel's Water Quality website www.sanibelh2omatters.com.

Soil Testing

Most Florida soils contain naturally high levels of phosphorus. Soil tests conducted at a variety of locations around the Island confirmed that this was also true on Sanibel. In most cases, Sanibel soils contain enough phosphorus, without fertilizer, to maintain healthy lawns and landscapes.

To determine the fertilizer needs of your lawn or landscape, you can perform your own soil test. These tests are simple, inexpensive and can help you avoid over-application of fertilizer. Contact the Lee County Cooperative Extension Office in Fort Myers for additional information or to obtain a soil testing kit (239) 461-7500.

The Fertilizer Label—What to Look For

The three identifying numbers on a fertilizer label indicate the percentage of the primary nutrients by weight. For example, a bag marked "11-2-2" contains 11% nitrogen (N), 2% phosphorus (P) and 2% potassium (K).

Avoid using "weed & feed" products that contain herbicides and fertilizer together. Pesticides should be applied only to affected areas.

Choose a product that contains no more than 20% total nitrogen and no more than 2% phosphorus. Fertilizers must also contain at least 50% slow release nitrogen.

Fertilizers may also contain secondary elements such as magnesium for sugar formation, calcium to promote root growth, or sulfur for green color. Micronutrients, or elements required in very small quantities, may include manganese, zinc, iron, copper, molybdenum and boron.

The Sanibel Ordinance does not limit application of secondary or micronutrients. These products may be applied, if necessary, anywhere on your landscape throughout the year. For example, applying iron (Fe) in the summer can be an effective way to green up your lawn, without encouraging additional growth.

What's the Big Deal About Slow Release Nitrogen?

According to the University of Florida, fertilizers with larger amounts of slow release nitrogen are more likely to be used by plants and less likely to leach into groundwater or wash away in runoff. The Sanibel Ordinance requires that fertilizers contain at least 50% slow release nitrogen. A product with 50% slow release nitrogen means that 50% of the nitrogen is available immediately and the remaining 50% will be slowly released over a period of time. For the average homeowner, this will mean lower maintenance and less frequent application.

Unfortunately, slow release nitrogen may not be listed as "slow release nitrogen" on the label. If you don't see "slow release", look for one of these synonymous terms:

***Water insoluble**	***Timed release**
***Slowly available**	***Controlled release**

To determine the total percentage of slow release nitrogen, divide the percentage of slow release nitrogen by the percentage of total nitrogen in the fertilizer. A bag labeled 10% slow release nitrogen divided by 11% total nitrogen = 91% slow release.

% Slow Release ÷ % Total Nitrogen

10% ÷ 11% = 91% Slow Release Nitrogen

Scotts® Organic Choice™ Lawn Food F643

Guaranteed Analysis 11-2-2

Total Nitrogen (N) 11%

0.11% Ammoniacal Nitrogen

10.00% Water Insoluble Nitrogen*

0.89% Water Soluble Nitrogen

Available Phosphate (P_2O_5)..... 2%

Soluble Potash (K_2O)..... 2%

Calcium (Ca)..... 1.5%

Sulfur (S)..... 1.0%

1.00% Combined Sulfur (S)

Derived from: Hydrolyzed Feather Meal, Meat Meal, Bone Meal, Blood Meal, and Sulfate of Potash.

* Contains 10% slowly available water insoluble nitrogen (N) from hydrolyzed feather meal and meat meal.

How to Calculate Your Fertilizer Use

Fertilizer may be applied at a rate of 1 pound of nitrogen per 1000 square feet.

To calculate the amount to apply on a 1000 sq. ft. area, simply divide the number 100 by the percentage of total nitrogen (first number on the bag). For example, to apply an 11-2-2 product to your lawn, divide 100 by 11 to get 9.1 pounds of fertilizer needed to cover 1000 square feet of grass. If the area to be fertilized is only 500 sq. ft., then only half as much fertilizer is needed. If the area is 2000 sq. ft., double the amount of fertilizer.

100 ÷ % Total Nitrogen = Pounds of fertilizer to apply on 1000 sq. ft.

100 ÷ 11% Nitrogen = 9.1 pounds/1000 sq. ft.

500 sq. ft. = 500 ÷ 1000 = 0.5 0.5 X 9.1 = 4.6 pounds

2000 sq. ft. = 2000 ÷ 1000 = 2 2 x 9.1 = 18.2 pounds

Determining the size of the area (square footage)

To determine the square footage of lawn to be fertilized either measure it directly or measure the entire area length by width, then make subtractions for house, driveway, and other areas that are not to be fertilized.

Example:

Total Lot Size	85' x 130'	11,050 sq. ft.
- House	40' x 80'	3,200 sq. ft.
- Driveway	14' x 50'	700 sq. ft.
- Wetland Buffer Area	25' x 130'	3,250 sq. ft.
= Total Area to be Fertilized		3,900 sq. ft.

On page 7, we calculated that using an 11-2-2 product, we would use 9.1 lbs. of fertilizer to cover 1000 sq. ft. To cover 3,900 sq. ft., 35.5 lbs. of fertilizer will be needed.

$$\frac{3{,}900 \text{ sq. ft.}}{1{,}000 \text{ sq. ft.}} = 3.9 \times 9.1 = 35.5 \text{ pounds of fertilizer}$$

Buffer areas

Sanibel is known for its exceptional aquatic wildlife. Extreme caution is vital when fertilizing near any body of water. Fertilizers containing nitrogen and phosphorus cannot be applied within 25 feet of these highly sensitive areas: ponds, streams, lakes, canals, retention areas, drains and drainage ditches and wetlands.

Impervious Surfaces

Fertilizer should never be applied to hard surfaces such as streets, sidewalks, and driveways. Fertilizers can stain concrete and hard surfaces. One rain event could wash the fertilizers into nearby storm drains or road ditches, eventually impacting nearby waters. Use a broom to sweep up accidental spills immediately.

Helpful Tools

If doing the math seems like a daunting task, the City has created some tools to simplify the process. The chart below gives the proper application amounts for the most common nitrogen analyses.

If the nitrogen content of your fertilizer is not listed, you can use the calculator on the Fertilizer section of the City of Sanibel's Water Quality website www.sanibelh2omatters.com. Simply input the size of the area to be fertilized, the application rate (in lbs N/1000 sq. ft.), and the percentage of nitrogen in your fertilizer bag. The calculator will take care of the rest.

City of Sanibel Fertilizer Ordinance
Proper Application Rates for Some Common Fertilizer Products

Area (sq ft)	% Nitrogen in Fertilizer Bag				
	6%	10%	12%	15%	16%
10	2.6 oz 6 tbsp	1.6 oz 3 tbsp	1.4 oz 3 tbsp	1 oz 2 tbsp	1 oz 2 tbsp
50	13.2 oz 1 3/4 c	8 oz 1 c	6.6 oz 14 tbsp	5.4 oz 12 tbsp	5 oz 10.5 tbsp
100	1.7 lbs 3 1/2 c	1 lb 2 c	13.4 oz 1 3/4 c	10.6 oz 1 1/2 c	10 oz 1 1/4 c
1000	16.8 lbs 35 c	10 lbs 19 c	8.4 lbs 17 1/2 c	6.6 lbs 14 1/2 c	6.2 lbs 13 c
1500	26 lbs 52 1/2 c	15 lbs 28 1/2 c	13 lbs 26 c	9.8 lbs 22 c	9.6 lbs 19 1/2 c
3000	50.4 lbs 104 1/2 c	30 lbs 57 c	25.2 lbs 52 c	19.6 lbs 43 1/2 c	18.8 lbs 39 c

Weight: ounces (oz); pounds (lbs) Volume: tablespoons (tbsp); cups (c)

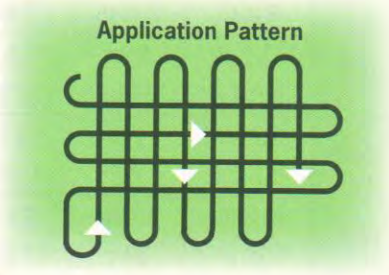
This chart provides the approximate amount of fertilizer to use for a given lawn or landscape area by weight (top number) and also by volume (bottom number) to deliver 1 lb N/1000 sq. ft. (the maximum rate for a single application of slow release fertilizer).

Fertilizer Application Techniques

Applying for the Best Results

The Ordinance requires that deflector shields be used with broadcast (rotary) spreaders. The shield needs to be positioned to deflect fertilizer granules away from impervious (hard) surfaces, bodies of water and storm drains.

Using a Broadcast Spreader to Apply Dry Granules



1. Be sure that both the spreader and fertilizer are dry.
2. Check the fertilizer label.

   If the recommended rate of application is 1 lb N/1000 sq.ft. or less, then follow the label instructions to determine the proper spreader setting.

If the recommended rate of application is greater than 1 lb N/1000 sq. ft. or if the fertilizer label does not list spreader settings, set the spreader on the smallest setting, add the appropriate amount of fertilizer and go over the area in a north/south direction. When you have covered the area to which you are applying product, or when you have half of the fertilizer left in the hopper, turn and cover in an east/west orientation until you run out of fertilizer.

3. Be sure the spreader is on a hard surface and that you wear gloves and safety glasses when you add the fertilizer. Close the broadcaster vent and fill the hopper slowly, keeping fertilizer away from eyes and skin.

4. Sweep up any spilled fertilizer immediately.

Spraying Liquid Fertilizer

1. Wear gloves and safety glasses to fill the sprayer canister with liquid or soluble fertilizer.
2. Attach the canister unit to the end of your garden hose.
3. Move at a steady pace to cover the entire lawn evenly. Walk slowly, spraying from side to side.

Important Note to Homeowners Using Professional Services

All persons applying fertilizers for hire (including lawn maintenance, landscape, and pest control companies), are required to possess a Vegetation Competency Card and Fertilizer Endorsement. If you hire a professional, be sure the contractor is City licensed.

- Ask to see their current Vegetation Competency Card AND Fertilizer Endorsement. At least one certified person must be present ON SITE at all times when fertilizers are being applied.
- Be aware of and responsible for activities occurring in your yard.
- Report any suspicious activities to City Code Enforcement (239) 472-4136.

Exemptions

- Newly established lawns and/or landscape plants for first 60 days after planting.
- Damaged lawns and/or landscape plants for 60 days, only to damaged area.
- Areas where soil tests confirm that phosphorus levels are below 10 parts per million.
- Vegetable gardens, so long as the gardens are not within 25' of a body of water or wetland.
- Yard waste, compost, mulches, or other similar materials that are mainly organic in nature and are applied to improve the physical condition of the soil.
- Reclaimed water used for irrigation, provided that reclaimed water is not used within 25' of a body of water or wetland.

Administrative Variances

Permission to apply fertilizers outside of the provisions of the Ordinance may be granted by the City's Department of Natural Resources if:

- Soil tests indicate inadequate phosphorus to meet plant needs.
- Other sufficient written evidence is provided to indicate fertilizer needs beyond the provisions of this Ordinance.

Any Variance granted will state in writing the Variance conditions including exact locations, length of time, nutrient concentrations, application rates and any other specific conditions deemed necessary.

Penalties

1) Violation of or refusal to comply with this Ordinance shall be considered a 2nd degree misdemeanor. Upon conviction, punishment shall include a fine up to $500 or imprisonment up to 60 days in jail, or both. Each violation counts as a separate offense.
2) The City reserves the right to take any lawful action to prevent or remedy any refusal to comply with the Ordinance. Such action may include Code Enforcement proceedings pursuant to applicable City code provisions and Chapter 162, Florida Statutes.
3) Violator shall be subject to pay the City's cost of prosecution as well as the costs associated with any necessary environmental clean-up effort resulting from the violation. If a professional violates the Ordinance by improperly applying fertilizer at a private residence, it will be the professional, not the homeowner who is penalized.

Other Ways to Prevent Personal Pollution

- Plant more Florida natives. Florida's native plants have adapted to local conditions over many millennia and, when planted in the right location, are adept at surviving without fertilizer and irrigation.

- Keep leaves and lawn clippings out of gutters, streets, and ditches. Consider leaving lawn clippings on the grass or backyard composting.
- Pick up pet waste promptly.
- Control soil erosion around your property by covering soil with vegetation or mulch. Bare soil can be easily washed away with rain, carrying excess nutrients with it.
- Wash your vehicles on grass so that the detergents soak into the lawn, rather than running down your driveway into the storm drain OR take your car to a car wash where the water is recycled.
- Never put motor oil in the trash or pour it on the ground, or down a storm drain. Recycle it instead!
- Don't dump anything down storm drains. Remember, storm drains flow directly and without treatment into local waterways.

Special Notes for Commercial and Institutional Applicators

What's New? Licensing Requirements

The City of Sanibel requires all contractors working with vegetation on the Island to possess a valid Vegetation Certificate of Competency. Contractors who applied fertilizer but did no other vegetation work were previously exempt from this requirement.

Under the new Ordinance, ALL commercial and institutional (groundskeepers, property managers, etc.) fertilizer applicators will be required to possess a valid Business Tax Receipt, Vegetation Certificate of Competency, and Fertilizer Endorsement. For companies with a number of employees, not all employees will be required to take the fertilizer course. **Companies must have at least one certified person on site at all times when fertilizers are being applied.**

Contractors who do not hold a current Vegetation Certificate of Competency are required to sign up for the Vegetation Competency course. This course is offered quarterly and has been modified to include the new fertilizer information. Upon successful completion of

the course and receiving a passing score on the exam, participants will receive a Vegetation Certificate of Competency and the Fertilizer Endorsement.

For a short time, contractors who already hold a current Vegetation Certificate of Competency can sign up for a "Fertilizer Endorsement only" class. The class will last about 1 hour and is designed for those contractors whose Vegetation Certificate of Competency is not due for immediate renewal. After the initial endorsement, renewal will coincide with Vegetation Certificate of Competency recertification (every 5 years).

Register for either one of these classes in the Building Department at City Hall or by calling (239) 472-4555. For details regarding class scheduling, please visit the City of Sanibel's Water Quality website www.sanibelh2omatters.com.

License Holder Responsibilities

Once a Commercial/Institutional Applicator obtains the Fertilizer Endorsement, the following continuing requirements must be met:

- Must maintain a record of all nitrogen applications (lbs N/1000 sq. ft.) for each property.
- Must possess documentation of exemptions (new and/or damaged turf/plants).
- If applicable, must have a copy of any soil test results and approved Administrative Variance.
- Must allow City staff to obtain a sample of a fertilizer to be analyzed for nitrogen/phosphorus content.

Important Contact Information

By using fertilizers wisely, or choosing not to use them at all, we can all help to improve our water quality and preserve and protect Sanibel. We invite you to follow up with the contacts listed below.

To obtain a soil testing kit, contact the Lee County Extension Office at (239) 461-7500

To sign up for a Vegetation Competency Course or the Fertilizer Endorsement course, please call the City of Sanibel Building Department at (239) 472-4555

To ask for a speaker to present information on the Fertilizer Ordinance to your group, please call (239) 472-3700

To report a violation, please call the City of Sanibel Code Enforcement at (239) 472-4136

For more information, please visit the City of Sanibel's Water Quality Website at www.sanibelh2omatters.com and browse through the fertilizer section. The complete Fertilizer Ordinance 07-003 is posted on this website.

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