Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

February 8, 2011

Collier County
Attn: Mac Hatcher, Senior Environmental Specialist
3299 Tamiami Trail E
Suite 202
Naples, FL 34112

Dear Mr. Hatcher:

Thank you for your request dated February 3, 2011 seeking input from the Department on additional provisions to your proposed fertilizer ordinance that are more stringent than those required by section 403.9337, Fla. Stat. Collier County is to be commended for their recognition of the need for improved local source control of nutrient pollution. Florida's model fertilizer ordinance for urban turf was developed to be used in conjunction with other measures of good stewardship. It is also recognized that in some areas of the state the best management practices provided in the ordinance must be amended to account for unique, site specific conditions that make adjacent surface water resources more vulnerable to nutrient enrichment. Florida Statue 403.9337 acknowledges these points and provides local governments the authority to amend the ordinance with more stringent requirements. This authority is granted contingent upon documentation of those site specific conditions associated with increased vulnerability and documentation that complementary measures to the ordinance (a comprehensive non-point source control program) have been implemented.

The Department has reviewed the ordinance and identified four items as more stringent than the 2010 draft model ordinance. Those provisions, addressed individually below, are:

- Application of fertilizer containing N or P is prohibited June 1 – September 30.
- Application is prohibited within 10 feet of a waterbody.
- Total Nitrogen application is limited to 4 lb/1000ft^2 per year.
- All Nitrogen fertilizer shall not be less than 50% water insoluble, or slow release, forms.

Application of fertilizer containing N or P is prohibited June 1 – September 30.

The provision for a June 1-September 30 ban on application is substantially more stringent than the Model Ordinance. The current state of scientific knowledge to fully inform this decision is not complete. While it is intuitive that the potential for stormwater runoff is increased during the rainy season, there are other factors to consider in defining the effect of such a ban.

A black out period may unintentionally result in over-application of fertilizer in the days and weeks before and after the blackout period when rainfall can be significant. This is especially a possibility in the fall when turfgrasses are entering dormancy due to decreased sunlight and lower temperatures. Over-fertilization during this period results in less metabolic activity and lower nitrogen uptake into the plant.

However, even under natural conditions, some soils have little if any capacity to absorb additional water without generating runoff and both irrigation and fertilizer should be managed carefully during this period. Scientific estimates of the aerial extent of such soil conditions within Collier County are valuable information in the documentation of the need for more stringent requirements. Where such conditions are documented to exist within the county the following information would demonstrate a comprehensive approach.

- Documentation of irrigation restriction established by the county to maintain a modest irrigation deficit during these months to ensure that adequate capacity is available to absorb more intense rainfall events when they occur.
- Documentation of steps taken for de-compaction of residential and other landscape soils that have been compacted through poor construction practices or other means to increase soil moisture holding capacity and minimize runoff during wet periods.
- Documentation of measures to ensure that citizens are aware that fertilizers should not be applied to saturated soils or when there is a high likelihood of substantial rainfall before the nutrients can be absorbed by the plants or otherwise immobilized.

The Department would also like to note an error in the Conservancy report in which it is stated that about one half of southwest Florida's rain events contribute one inch or more of rain, and refer to Figure 3 by Dr. Thomas. Dr. Thomas points out that this is a slide of volume, not event frequency. Only 13.6% of events at Ft. Myers exceeded 1 inch of rainfall, according to Table 3.2 of

the 2007 Harper report. However, those events do contribute about 50% of the annual volume of rain received.

Application is prohibited within 10 feet of a waterbody.

The model ordinance relied on the Department's Green Industry Best Management Practices manual, which allows professionals with a functioning deflector shield, drop spreader, or knife-edge spray device to approach as close as three feet to a waterbody where permitted by land use and landscaping codes. The manual recommends a10 foot application prohibition when not using such equipment.

The Department notes that the minimum upland buffer from wetlands in the Collier Land Development code is 25 feet, but similar natural vegetative setbacks could not be found for other waterbodies. While stricter than the model, the proposed 10-foot setback is consistent with adjacent communities. Such consistency may help businesses avoid confusion when operating in multiple jurisdictions. The 10-foot setback is also consistent with the Florida Yards and Neighborhoods Handbook, written for homeowners.

Total Nitrogen application is limited to 4 lb/1000ft^2 per year.

This provision does not correspond to the Urban Turf Rule, upon which manufacturer instructions are based. The stricter standard may require homeowners to perform unfamiliar mathematical calculations to determine allowable application rates that are different than manufacturer's instructions on the bag. Additionally, this standard is 1 lb less than the minimum UF-IFAS and Urban Turf Rule recommendation for Bermudagrass in south Florida.

All Nitrogen fertilizer shall not be less than 50% water insoluble, or slow release, forms.

This provision is more stringent than the model ordinance and does not correspond to the Urban Turf Rule. It may require homeowners to read unfamiliar details of chemical labeling to determine if a legally-sold product is legal for them to use. Homeowners would also be required to know which chemical constituents are slow-release. The Department's Green Industry Best Management Practices is more stringent than the Urban Turf Rule; however, it is written for professionals who attend a six-hour training course addressing these and other issues.

> Additionally, this provision may inhibit the ability of homeowners to provide immediate treatment to damaged or injured plants or provide for rapid growth for annuals or new plantings (after roots are established). It may also make impossible the use of commercial fertigation or other low-dose but frequent applications, which may be more cost-effective but no less environmentally responsible.

The collective actions of Collier County to prevent nutrient loadings into adjacent surface waters are recognized and appreciated. Adoption of a local ordinance for urban fertilizer use will enhance the already implemented elements of the county's stormwater control program. I hope you find the comments offered above to be of assistance in demonstrating consistency with the expectations established in Florida Statutes 403.9337.

Sincerely,

Thomas M. Frick
Chief, Bureau of Watershed Restoration

TMF/mt