

TO: Seminole County Board of County Commissioners

Ms. Kim Ornberg, PE, Manager
Watershed Management Division

Ms. Shannon Wetzel, Principal Environmental Scientist
NPDES Program

FROM: Mac Carraway, Executive Director
Environmental Research & Education Foundation (EREF)

DATE: September 6, 2016

SUBJECT: Proposed Fertilizer Ordinance

Greetings:

The purpose of this package of information is to address the proposed fertilizer ordinance to be considered by Seminole County on September 27, 2016.

EREF is a non-profit trade organization representing the interests of the Green Industry, including turfgrass production and installation, landscape, professional lawn care, golf and sports turf, and related industry allies.

Our efforts are focused on outreach, education and advocacy for science-based and education-forward solutions supporting sustainable urban greenspaces.

EREF supports the FDEP model fertilizer ordinance and its focus on responsible fertilization and related management practices. We do not support the proposed Seminole County ordinance in its current form for a variety of reasons which we will enumerate below.

The information in this letter is being provided to demonstrate the difficulties and pervasive flaws in adopting a summer fertilizer blackout. However, that certainly does not mean Seminole County should do nothing. On the contrary, we would encourage Seminole County to take a fresh leadership position.

EREF, on behalf of its stakeholders, would like to offer the following alternative approach:

1. Put the Proposed Ordinance on hold indefinitely.
2. Partner with industry and other legitimate stakeholders (like the water management district, the academic and scientific community, and mainstream environmental organizations) in developing a comprehensive education effort to help consumers understand the importance and the how-to's of responsible lawn care, including fertilization and irrigation. EREF and the industry will help you

convey those messages. We strongly believe that a positive and unified education effort is what is needed to demonstrate the behavioral change possible when real education is given a chance.

3. Establish a credible and time-limited stakeholder workshop process to vet the science and alternative approaches relative to a thorough science-based and education-forward ordinance that can be an example to the rest of the state.
4. Review how the FDEP's TMDL process integrates into this discussion. Since the TMDL process will ultimately provide the regulatory framework for addressing impaired waters in Seminole County, its impact on the need for or the form of any future fertilizer ordinance should be fully considered.

In the absence of the proposed alternative approach just described, if you believe you must pass an ordinance right away, its restrictions on application should be for the winter, not the summer, and under any circumstances, certified lawn care professionals should be exempted, consistent with the BMP-driven exemptions provided for farms and sports/golf turf operations.

This letter is a summary of our thoughts and suggestions, with links to more detailed information. In addition, we have attached certain other information for your convenience.

Our key points and thoughts are as follows:

- ❑ The Proposed Ordinance follows the pattern of other summer blackout ordinances when such ordinances are clearly inconsistent with peer-reviewed science. Specifically, please refer to the comprehensive 2012 study funded by the Florida Department of Environmental Protection (FDEP – <http://wfrec.ifas.ufl.edu/turfgrass-science/nutrient-management-research/fdep-funded-study/>). The Executive Summary is a very instructive summary of pertinent elements of this discussion (<http://wfrec.ifas.ufl.edu/media/wfrecifasufledu/docs/pdf/003Executive-Summaries.pdf>) In the Executive Summary of that study are contained the following findings:

Maintenance of a healthy stand of turfgrass mitigated [fertilizer] losses from all species, particularly St. Augustinegrass, even at high rates of applied N. Where grass was not healthy or did not provide good cover, [fertilizer] losses were much higher...

There were few differences in [fertilizer] losses in response to irrigation at the rates tested here [including excessive irrigation].

- ❑ We do support appropriate limitation on fertilization of newly sodded grasses as noted in the study.
- ❑ As noted in the study, healthy turfgrass is a critical defense against nutrient leaching. Summer blackouts (during the most active growing season) such as the one in the Proposed Ordinance are contrary to that undeniable agronomic fact.

- ❑ Your neighbor, Orange County, adopted a summer ban. However, they exempted professional lawn care professionals in recognition of the overall discussion included in this letter. In addition, their ordinance provides a pathway for consumers to receive a comparable training-based exemption.
- ❑ Information coming out of similar debates in the Chesapeake Bay area confirm the environmental benefits of healthy turf. Please see the following link (<http://landscapemanagement.net/epa-lawn-fertilization-is-good-for-water-quality/?platform=hootsuite>).
- ❑ The summer blackouts are based on notions, perceptions or conventional wisdom of what happens to fertilizers in lawns and landscapes during the summer, not on science. There is no peer-reviewed science supporting the effectiveness summer blackouts. The appeal of these notions, namely that summer rains create significant nutrient leaching sufficient to justify the highly-restrictive and economically punitive nature of summer blackouts, is simply not based on any credible evidence. See our further discussion of rain events below.
- ❑ While we do not believe that science supports any kind of absolute fertilizer blackout, more modern and science-based fertilizer ordinance models exist. Two of the most recent county fertilizer ordinances (Hernando County and Alachua County) utilize a winter restriction period (e.g. December – February), which is an approach more consistent with further information in the FDEP study, along with reviews by the environmental personnel in those counties, and which is endorsed by FDEP and the Florida Department of Agriculture and Consumer Services. Specifically, when turfgrass is tending toward dormancy, plant and root systems are less effective in reducing nutrient movement. **In summer blackouts, consumers are left with no option but to fertilize in winter periods, increasing the potential for such movement.** This kind of consequence is the inevitable result of following emotions, notions and conventional wisdom versus science.
- ❑ Several common threads exist in the existing summer blackouts as follows:
 - They are largely unenforced or unenforceable.
 - They have been publicly “justified” on the basis of their educational value, not their actual ability to be effective at improving water quality. As noted elsewhere in this letter and the related attachments, real education is far more effective than punishment disguised as education.
 - There has been no substantive follow up to confirm that summer blackouts are making any difference in water quality improvement. Conversely, in the case of the blackouts passed in Southwest Florida and in the Indian River Lagoon, it is crystal clear that they have been totally ineffective (see Exhibit 1 and 2; EREF blog “The Tampa Bay Seagrass Miracle” and related source material).
 - The occurrence of significant rain events (>2”), **which are the single most important element driving the notions behind these ordinances**, are historically rare, despite the hyperbole and “conventional wisdom”. For example, in data for the last twenty years from the Florida Climate Center, Florida State University (<http://climatecenter.fsu.edu/>), the probability of two or more 2” rains in the four-month period between June and September in Orlando is about one-in-five or 20%. Further, during that four-month period, the average monthly total rainfall was about 7.5 inches. If one assumes only 2” rainfall events occur during that period, that would amount to less than

- four such events (7.5" ÷ 2") each month, and zero other rainfall. That's not how it happens, of course – the larger events are much more rare and smaller events much more common. **Based on these facts, the summer blackouts wipe out four months of critically-important lawn care and professional lawn-care activity based on the possibility of up to 15 rain events (Total Rainy Season = 30" ÷ 2" Events only = Maximum 15 events) during that entire period of about 122 days (less than once per week, at most). That blackout, occurring in the most active growing season, unequivocally has adverse impacts on turf health (especially newly installed turf after the recommended break-in period) and its ability to thrive and to defend against nutrient movement and erosion. Further, it impacts something on the order of 50% of the economic activity for professional lawn care providers for the whole year.** It is simply not even remotely reasonable to impose such an enormous penalty on the professional lawn care industry for 15 possible rain events for which there is only a 20% probability.
- In an article by UF/IFAS (Exhibit 3) is the following statement: "Let it be stated up front: The body of science does not support summertime fertilizer blackouts and, therefore, the University of Florida does not recommend or endorse them." The article goes on to say, "The genesis of the summertime fertilizer blackouts stems from a misinterpretation of the statement, "Do not fertilize when rain is imminent" that was contained in many UF/IFAS publications... Environmental activists, however, [wrongly] suggest that rain is imminent every day during Florida's rainy season."
 - The depth of the punitive nature of these blackouts on the professional lawn care profession is even more ironic in that **they are THE first line of defense in responsible nutrient management**. We encourage you to meet with them and learn about their nutrient and water management cultures, their training, their minimization of nutrients and their "spoon feeding" approach. The use of less nutrients is **inherent** in their approach – environmentally, agronomically and economically.
 - The most harmful risky behaviors in the summer are fertilizing impervious surfaces and sweeping clippings into the street and storm drains. The professional lawn care industry participated in the development of the Best Management Practices that ended these practices and have been following them for decades. Any statement to the contrary is simply untrue.
 - Despite the emotional and notional/perceived appeal of fertilizer ordinances, they ultimately get in the way of efforts to seek root causes of nutrient loading, such as atmospheric deposition and septic system discharges. Dr. Brian Lapointe, Research Professor, Florida Atlantic University Harbor Branch Oceanographic Institute suggests that septic contributions to water-quality impacts are significant in impaired waters but are inadequately addressed due to political expediency. Our translation: Let's avoid the expensive and challenging problems and go after the myth of cheap low-hanging fruit in the form of summer fertilizer blackouts. Going back to Tampa Bay for example, they ultimately succeeded because they invested the years and the dollars to tackle the big problems going back to the outset of the Clean Water Act. By the way, Dr. Lapointe was the expert who debunked the often-touted activist notion that lawn fertilizer was killing manatees in the Indian River Lagoon during their blackout debates. Dr. Lapointe noted in the Tampa Bay Times on July 17, 2013 (Exhibit 4) that "the culprit is actually sewage from...leaks in septic tanks...or

it could be migrating from the deep-well injections of treated sewage into the aquifer". That would have been nice to know during the ordinance discussions as that particular myth, among others, was being used as a club to pass the summer blackout ordinances (the disturbing picture below, callously displayed outside local government chambers during ordinance hearings, is the gauntlet of dead manatees held out by activists as the victims of lawn fertilization – so much for truth and science).



- ❑ In the early days of the blackout ordinance development in Southwest Florida, red tide was the culprit of the day. In other words, activists openly promoted what they knew to be the false premise that fertilizing urban greenspaces causes red tide. Those around at that time will remember the red tide t-shirts, etc. Of course, that was scientific nonsense which has been clearly acknowledged by Florida's national estuary programs. Red tide is, was and always has been a deep-water phenomenon unrelated to land-based activity. But as with the dead manatees, the damage was done. Not altogether surprisingly, these fear tactics combine to promote a hurried "let's do something" response.

Thank you for your consideration. Please feel free to call on us if you have any questions, comments or concerns.