



Agenda MEMORANDUM

Streets & Stormwater Department

Natural Resources • Stormwater • Streets & Traffic

To: City Council
From: Gregg Strakaluse, Director
Date: August 17, 2021
Regular Meeting Date: September 15, 2021

Legislative Quasi-Judicial

SUBJECT:

Public Hearing and Second Reading readopting the Ordinance within Chapter 52, Article VII Fertilizer Use and Maintenance of Urban Landscapes.

SUMMARY

This item reaffirms and readopts the existing Code of Ordinances Chapter 52, Article VII pertaining to fertilizer use and maintenance of urban landscapes, requests that City Council hold a Public Hearing and First Reading of the Ordinance amendment; and schedule a Public Hearing and Second Reading for the September 15, 2021 Regular meeting.

BACKGROUND:

As discussed at the August 16, 2021 City Council Workshop, re-adoption of the City's fertilizer ordinance is requested to reaffirm the intent of the current City Council. Naples Bay has been listed as an impaired waterbody in 2019, 2020 and 2021 because Naples Bay failed to meet state water quality standards due to nutrient pollution in 2019, 2020 and 2021. If local waterbodies are listed as impaired, cities may adopt more stringent standards than the State of Florida's Model Fertilizer Ordinance under the state's limited preemption of fertilizer ordinances.

Naples Bay, and portions of the Gordon River within the City of Naples, failed to meet state water quality standards based on water quality testing conducted between 2011-2018 and again in testing conducted between 2019-2021. Because waterbodies within the City of Naples are still listed as impaired, staff recommends the City Council review and re-adopt the fertilizer standards to control the amount of nutrients that enter stormwater systems that are eventually discharged to waterbodies within the City of Naples.

Because the state law contains specific mandatory requirements for adoption of local fertilizer ordinances, additional agenda backup documents, including but not limited to scientific articles, and descriptions of our local, state and federal programs working to improve water quality and stormwater management within the City of Naples, are included in this agenda item for first and second reading.

On February 5, 2019, the Collier County Board of Commissioners held a workshop on the issue of fertilizer in preparation for a possible County ordinance change. City Council

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members and City staff were invited to participate in that workshop. Several scientists, industry professionals, and environmental organizations, and members of the public provided input to help guide the County towards an outcome that would best protect southwest Florida waters. While no formal action was taken at this workshop, it appeared that there was leadership consensus for a wet season ban on the use of fertilizer in the City of Naples.

At the March 18, 2019 City Council Workshop, staff and technical professionals from the industry and the Conservancy of Southwest Florida presented information on the topic of fertilizer application. At the conclusion of the meeting, City Council directed staff to draft ordinance changes that included a summer fertilizer ban, limited annual nitrogen fertilizer application of 4-pounds per thousand square feet per year, and prohibiting phosphorus fertilizer application unless a soil/tissue test showed a deficiency.

Naples Bay is designated as an impaired water body and recent sampling events indicate that Naples Bay does not meet nutrient criteria, as set by the Florida Department of Environmental Protection. The Gulf of Mexico has been plagued with red tide and toxic algae events, most notably evident in 2018 when local municipalities had to remove over 2,000 tons of dead sea life from southwest Florida beaches and shorelines {as reported by the honorable U.S. Representative Francis Rooney's office-April 18, 2019}. Water quality data collected by the City of Naples (from beach outfall removal design project) and Collier County Department of Health (from routine shoreline beach sampling) have indicated times of high bacteria levels causing swim warnings to be posted on Naples Beaches for the first time in many years.

Nutrient discharges can be both natural and man-made. Landscape fertilizers applied in excessive quantities are considered a man-made point source pollution issue. In 2015, the City commissioned a report that would provide a statistical analysis of over 7-years of data pertaining to water quality and biological habitat in Naples Bay. The report produced is entitled, *'Naples Bay Water Quality and Biological Analysis Report'*. Within the report, the following scientific conclusions were made.

"Because the majority of declining trends in wet season Total Nitrogen are shown for periods after 2008, the results may indicate that implementation of fertilizer ordinance in 2008 is a contributing factor for the decrease TN trend observed in Naples Bay."

"With the statistically significant decrease in wet season nitrogen and phosphorus at some long-term Bay stations coinciding with the implementation of the fertilizer ordinance, we cannot discount the importance of the ordinance as a potential contributing factor to the decrease."

FLORIDA STATUTES:

403.9335 Short title.—Sections 403.9335-403.9338 may be cited as the "Protection of Urban and Residential Environments and Water Act."

403.9336 Legislative findings.—The Legislature finds that the implementation of the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes (2008), which was developed by the department in conjunction with the Consumer Fertilizer Task Force, the Department of Agriculture and Consumer Services, and the University of Florida Institute of Food and Agricultural Sciences, will assist in protecting the quality of Florida's surface water and groundwater resources. The Legislature further finds that local conditions, including variations in the types and quality of water bodies, site-specific soils and geology, and urban or

rural densities and characteristics, may necessitate the implementation of additional or more stringent fertilizer management practices at the local government level.

403.9337 Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes.—

(1) All county and municipal governments are encouraged to adopt and enforce the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes or an equivalent requirement as a mechanism for protecting local surface and groundwater quality.

(2) ***Each county and municipal government located within the watershed of a water body or water segment that is listed as impaired by nutrients pursuant to s. 403.067, shall, at a minimum, adopt the department's Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes. A local government may adopt additional or more stringent standards than the model ordinance if the following criteria are met:***

(a) ***The local government has demonstrated, as part of a comprehensive program to address nonpoint sources of nutrient pollution which is science-based, and economically and technically feasible, that additional or more stringent standards than the model ordinance are necessary in order to adequately address urban fertilizer contributions to nonpoint source nutrient loading to a water body.***

(b) ***The local government documents that it has considered all relevant scientific information, including input from the department, the institute, the Department of Agriculture and Consumer Services, and the University of Florida Institute of Food and Agricultural Sciences, if provided, on the need for additional or more stringent provisions to address fertilizer use as a contributor to water quality degradation. All documentation must become part of the public record before adoption of the additional or more stringent criteria.***

(3) Any county or municipal government that adopted its own fertilizer use ordinance before January 1, 2009, is exempt from this section. Ordinances adopted or amended on or after January 1, 2009, must substantively conform to the most recent version of the model fertilizer ordinance and are subject to subsections (1) and (2), as applicable.

(4) This section does not apply to the use of fertilizer on farm operations as defined in s. 823.14 or on lands classified as agricultural lands pursuant to s. 193.461.

AGENDA BACKUP:

The Agenda Backup for this item is voluminous and contains:

The FDEP Verified Lists of Impaired Waterbodies within the City of Naples (2019) and (updated 2021),

Numerous scientific studies that lend strong support to a wet season ban and the slow controlled release fertilizers requirements based on:

The City of Naples local conditions and geographic location at the southwest tip of Florida's peninsula;

The City of Naples subtropical climate and year-round annual growing season

The City of Naples daily rainfall occurrence in the summer rainy season as clouds from over the City and move into the City from the Everglades east of Naples resulting in daily afternoon storms during the summer months,

The City of Naples MS4 Permit detailing the efforts the City has made towards a comprehensive program to reduce nutrient sources and inputs in stormwater discharges within the City of Naples,

The City's Stormwater Master Plan, and

The City's public education brochures and programs to reduce nutrients in stormwater; and

Comments from DEP and IFAS on the City of Naples proposed 2021 Ordinance, and the following additional materials from IFAS and DEP:

IFAS/DEP Support Materials and Excerpts

IFAS recommendations related to the use of 50% slow release nitrogen:

1. FDEP-IFAS FYN Handbook 2009 Edition The Florida Yards & Neighborhoods Handbook

P 25: "Slow and controlled release fertilizers provide nutrients to plant roots over an extended period of time. This allows you to fertilize less frequently – and to prevent nutrients from leaving your landscape and entering waterways, contributing to harmful algal blooms and other water quality problems...it's a good idea to look for a fertilizer with higher amounts of slow-release nitrogen."

P 26: "If using a quick release product, apply only up to 0.5 pound of nitrogen per 1000 square feet."

2. 2021 FDEP Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries (GI BMP Manual):

https://drive.google.com/file/d/1pP9jE65XOMHWYVkJGhH_IeMou4Gz2jJ2O/view?usp=sharing

P 45: Nitrogen Rate and Frequency: "To limit the environmental impact of your fertilization program, it is recommended that no more than 0.5 pounds of water-soluble N per 1,000 square feet be applied in a normal application. Total N should be limited to 1 lb/1000 ft², per the Urban Turf Rule."

3. General Recommendations for Fertilization of Turfgrasses on Florida Soils SL 21 <http://edis.ifas.ufl.edu/pdffiles/LH/LH01400.pdf>

P 3: "In light of potential environmental concerns it is now recommended that no more than one half (0.5) pound of the nitrogen in the application be in the soluble form. Thus in order to make an application of 1 pound of actual nitrogen per 1000 square feet of turfgrass you would need to use a blended fertilizer product containing no more than 50% of the total N in soluble form with the rest of the nitrogen originating from a

slow-release N source.”

P 4: “To avoid burn, never apply fertilizer at greater than the recommended rate of 0.5 pounds of soluble N per 1000 square foot per application.

Fertilizer Application Rates:

FDEP-IFAS FYN Handbook 2009 Edition The Florida Yards & Neighborhoods Handbook
P 24: “Apply an iron source instead of a nitrogen fertilizer to green the lawn without increasing growth in the summer, use chelated iron or iron sulfate.

2009 FYN Yard Certification Checklist: Items to Qualify for a Florida Friendly Yard include: “Minimal to no supplemental fertilization is used in the landscape”; and “If supplemental fertilization is used, lawn and landscape beds are fertilized at the lowest of the fertilizer ranges recommended by the UF Turfgrass and Landscape Science Programs.”

Checklist of Florida-Friendly Landscaping Practices (2018)
P 2: “Fertilize as needed rather than routinely (pages 23 and 28); follow local rules regarding fertilizer “black-out periods.”

Rainy Season Application Bans:

1. 2021 FDEP Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries (GI BMP Manual):
https://drive.google.com/file/d/1pP9jE65XOMHWYVvGhH_IeMou4Gz2jJ2O/view?usp=sharing

P 56: BMPS FOR TURFGRASS AND LANDSCAPE FERTILIZATION: “Use Fe and/or Mn instead of N to enhance turfgrass color on soils having a pH greater than 7.0, especially during times of enhanced rainfall.”

2. FDEP-IFAS FYN Handbook 2009 Edition The Florida Yards & Neighborhoods Handbook

2009 FYN Yard Certification Checklist: Items to Qualify for a Florida Friendly Yard include: “If a lawn is present, iron is used instead of nitrogen to “green-up” the lawn in the summer rainy season.”

3. General Recommendations for Fertilization of Turfgrasses on Florida Soils SL 21
<http://edis.ifas.ufl.edu/pdffiles/LH/LH01400.pdf>

P 4: “Many times turfgrasses, such as Centipede grass, Bahia grass and St. Augustine grass, turn yellow during the summer due to lack of N fertilizer. However, fertilization with N in the summer is not always desirable since this often encourages disease and insect problems. Many times the addition of iron (Fe) to these grasses provides the desirable dark green color, but does not stimulate excessive grass growth

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which follows N fertilization.”

4. Frequently Asked Questions about Florida-Friendly Landscaping ENH 1113 Jan 2009
<http://ufdcimages.uflib.ufl.edu/IR/00/00/34/33/00001/WQ14400.pdf>

P 2: Question 3: What are the best ways to prevent water pollution? Bullet #5 “Apply an iron source instead of additional fertilizer in the summer to keep grass green without increasing growth.”

FUNDING

Other than noticing requirements and staff time, there are no fiscal impacts to this item. Impairments to Naples Bay and the Gulf of Mexico are of critical concern to the fishing and tourism industries, as well as the real estate market.

RETURN ON VISION (ROV):

Goal #1: Preserve Naples small town character and culture.

Readopting the fertilizer ordinance reaffirms the City’s strong desire to preserve small town character and culture that depend heavily on clean, clear water and waterbodies that are free from pollution and are safe for swimming, bathing, recreation, fishing, and tourism.

Goal #2: Environmental sensitivity.

Readopting the fertilizer ordinance supports a healthy environment dependent upon clean water and waterbodies that are free from pollution and are safe for swimming, bathing, recreation, fishing, and tourism.

Goal #3: Maintain an extraordinary quality of life for residents.

Clean water is critical to quality of life and enjoyment of waterbodies that are free from pollution and are safe for swimming, bathing, recreation, fishing, and tourism.

Goal #4: Maintain and strengthen the economic health and vitality of the City.

Without clean water the public desire to live and do business in the city is significantly diminished, thereby affecting economic conditions. Ensuring stormwater is free from excess nutrients at the source is less expensive than paying for programs and projects to remove nutrients from stormwater before discharge into the City’s waterbodies.

RECOMMENDED ACTION:

Hold a Public Hearing and First Reading readopting the Ordinance of Chapter 52, Article VII Fertilizer Use and Maintenance of Urban Landscapes; and schedule a Public Hearing and Second Reading for the September 15, 2021 Regular meeting.