

**Brief history of Marco Island Stormwater Ordinance, Questions and Answers and Rationale
for New Stormwater Ordinance Amendment
12/30/2019**

The purpose of this "White Paper" is to solicit support from the Waterways Advisory Committee to make a recommendation to City Council that they amend the current Stormwater Ordinance to expand coverage to single family homes, improve pollutant removal efficiencies and provide for penalties for failure to adhere to the Code. It is also my hope that we accompany this "White Paper" with recommendations for a Marco Island Environmental Initiative and education for Citizens Involvement in improving water quality.

History

Marco Island received notice on 1/30/2013 that it was considered a municipal separate storm sewer system(MS4) and therefore required it to obtain a National Pollutant Discharge Elimination System(NPDES)permit and develop and implement a Stormwater Management Program(SWMP).It required Marco to submit a Notice of Intent(NOI) to comply with the Phase II MS4 generic permit by 6/1/2014.

One of the required items was a Stormwater Ordinance. Drafting a Stormwater Ordinance started in 2015 in order to be compliant with the cities MS4 General Permit Coverage. The end of the second year of the program was March 15,2017 which required an Ordinance be passed. The City asked for a one-year extension as consensus could not be reached. There was support from the Waterways Advisory Committee, at that time, of an ordinance. Public Works director Tim Pinter introduced and supported the WAC draft of the ordinance in the Spring of 2017. Throughout the balance of 2017 various watered-down versions of the Ordinance were drafted.

At the City Council meeting on March 5,2018, Council, in order to pass something before the expiration of the one year extension, gutted the Ordinance despite advice from attorney Alan Gabriel that some of the changes would not be compliant with federal requirements for clean water or the South Florida Management District and it would be contrary to current Code. He was directed to redraft the Ordinance based on Council's comments.

Questions, Answers and Rationale

The following are some questions and answers regarding an amended ordinance:

1. Why does the existing Ordinance need to be changed or amended? Everything is fine.

Answer: Everything is not fine. While the current ordinance may be minimally compliant with federal requirements for clean water, it poses no regulations on certain activities that are known to cause stormwater pollution or follows all the guidelines of the Southwest Florida Management District.

On August 22, 2019 Marco Island received a letter from the FDEP indicating that that several waterbody segments do not meet nutrient water quality standards. In some cases levels of phosphorus, nitrogen and Chlorophyll-A are two to three times higher than the state standards. Therefore, Marco Island has become officially impaired for water quality. The waters of Marco Island continue to deteriorate. Future construction and other activities should follow the more stringent guidelines and efforts must be made to stop pollutants and clean up existing conditions.

2. I've heard that that the state codes and guidelines exempt development of single homes on sites of less than 1 acre. If so, why don't we rely on that loophole?

Answer: Why would we want to rely on a loophole when most building sites on Marco Island are less than 1 acre? In fact, most sites are a quarter of an acre which allows about 4 homes to be built. The one-acre guideline is not appropriate for Marco Island and was intended to cover all of Florida, not a small barrier island. We should be looking to enact the most environment friendly guidelines possible, not trying to find a loophole to avoid existing law and best management practices to protect the environment.

3. I've heard that the amendments being proposed will place a hardship on the contractors of Marco Island. Are we trying to hurt the contractors?

Answer: No. The amended ordinance would only apply to new construction permits for new and redeveloped lots. Let's be realistic. The contractor is not going to absorb the cost of implementing the new requirements. Those costs and requirements will be passed along to the homeowner. If the law is passed, all contractors will be required to comply with the same rules so no contractor will have an unfair advantage.

4. I've heard the cost of compliance will be between \$1,500 and \$15,000 and may limit the size of a house, thereby reducing the value of my lot. Is this an unfair "taking" by government?

Answer: No, no more than complying with existing building and environmental codes is a "taking". As the world changes the laws governing society evolve. Building codes have become stricter to make homes safer. Laws are enacted to protect the public and protect the environment. No "rights" are being taking away any more than the state requiring you to have a driver's license. You can drive, but to drive legally you have a driver's license. You can still build a home; it just must comply with zoning and building codes.

5. Won't implementing this law discourage development of single-family homes and make them more expensive?

Answer: There are only about 500 buildable lots remaining in addition to the approximately 5,000 single family homes on the Island. There are also many homes that will be torn down and rebuilt with newer homes. The cost of vacant lots ranges from about \$250,000 to over \$3,000,000. The cost to build a new home can range from \$400,000 to over \$3,000,000, not including docks, boat lifts, landscaping and other improvements. It would be very hard to find a new waterfront home for less than \$1,000,000 and the average cost of a new home with all improvements is probably closer to \$1,500,000- \$2,000,000. The cost to do the changes we are proposing are negligible in homes in that price range.

6. I've heard the amendments are anti-development. True?

Answer: No, the amendment is not anti-development. It is pro responsible and environmentally friendly development.

7. Assuming that all makes sense for new construction, what about the 5,000-6,000 existing homes? Aren't they contributing to the problem too?

Answer: Yes they are. The most important issue is to have code enforcement that will enforce existing ordinance regarding drainage and the city to maintain the swales. One of the simplest

ways is to close off all drains at the seaway or canal and any downspouts within the setback. Keep drain water from flowing directly to the canals. Code enforcement needs to patrol the canals to make sure all homes are compliant with current Code. The city needs to fully fund a program that restores the swales that have been allowed to deteriorate. They need to fill the inlets that undercut the existing 450 outlet drains the flow into the canals. In addition to modest changes in how some existing developed residential properties can improve water quality, Public Works maintenance could implement practices such as vacuuming residential streets with a truck vacuum to improve runoff from City roadway surfaces. Code enforcement could more effectively regulate landscapers and fertilizer and stop grass clippings in the canals.

8. What specifically are you suggesting?

Answer: The language we are suggesting is contained in the May 9, 2017 Draft of the Ordinance before it was rewritten by the City attorney at the direction of Council.

The language in these sections, which were deleted from subsequent as well as the final MS4/Stormwater Ordinance that was ultimately adopted by City Council a year later in 2018 as Ordinance 18-07, pertain to requiring a site plan for all (new, including redevelopment) construction projects in all zoning districts (including single-family homes) for administrative review and approval prior to issuance of a building permit.

The site plans were to be prepared by a professional engineer licensed by the State of Florida with emphasis towards proposed stormwater BMP's designed to meet presumed pollutant removal efficiencies of at least 85% of total suspended solids, total nitrogen and total phosphorus, which as we know are at present contributory to Marco Islands impaired water quality.

In addition to having a requirement for a site plan, the May 9, 2017 Draft specified that rainfall runoff from roof drains be included in the water quality calculations, that upon completion of construction and prior to issuance of a certificate of occupancy the engineer provide professional certification under seal that the work has been satisfactorily completed in accordance with the approved plan, and that failure to implement and maintain erosion control, discharging turbid water into swales, storm sewers or surface waters, or failure to comply with an environmental permit would be subject to daily and per violation fines. Parenthetically, regulations such as these are commonplace in most MS4 municipal jurisdictions in the State of FL, including Naples.

9. Why do we need a Professional Engineer (P.E.) to do these calculations? I've heard that the general contractors are perfectly capable of doing them.

Answer: It is not as simple as just making some calculations. A licensed engineer with qualified experience should evaluate many variables on a development site, including soil percolation rate, depth to groundwater, topography and possess the knowledge and familiarity with a variety of best water management practices and code requirements. Yes, most general contractors are capable of making the calculations, making sure they are included on a submission for a building permit and are familiar with the soil and topography conditions on the island. However, the final survey at completion of construction must include a certification from a professional engineer and licensed surveyor that the construction has been completed satisfactorily in accordance with the plans and specifications originally approved by the City. A homeowner and the City are therefore at risk if the builder's calculations were done incorrectly.

10. Will this add to the time or expense to process building permits in an already overburdened permit department?

Answer: No, since most of the work is being performed by outside professionals it should only minimally add to the review process. If there is additional staffing needed it should be incorporated in Marco's operating budget or offset by some minor increases in building permit costs or environmental impact fees.

City Council needs to have the courage to resist the pressure of special interest groups and enact the amendment to the existing Ordinance. It is the right thing to do for all of Marco Island, indicates the City's commitment to do the right thing and take every measure possible to help restore the water quality of our canals and protect the environment for future generations.

Attached is the language taken from the May 9, 2017 draft of the Ordinance:

Draft Amendment to Stormwater Ordinance

Sec. XXXXX. - Stormwater regulations.

- (a) No building permit shall be issued for any building in the city, unless a site plan, as provided in the land development code, is submitted with the application for such building permit illustrating the location of driveways, sidewalks if required by this code, parking strips consistent with this code and perimeter retaining structures or a surface water management plan which provides for containment of runoff on-site with surplus routed to rights-of-way or right-of-way swales for drainage as applicable.
- (b) Site plans for construction projects in all zoning districts shall be reviewed and administratively approved by staff for on-site erosion control per applicable code provisions outlined herein. Appropriate erosion control devices must be planned, implemented, and maintained in accordance with the best management practices (BMP) described in the Florida Department of Environmental Protection's *Erosion & Sediment Control Designer & Reviewer Manual*, most current edition, and required as part of any permit review, approval, and compliance. If approved BMPs are not working properly, it is the responsibility of the developer or contractor to utilize new BMP methods as necessary to provide erosion and sediment control.

SECTION XXXX. Adoption of Code Provision. That the Code of Ordinances, City of Marco Island, Florida, is hereby amended by adding a new section, to be numbered XXXXX, which section reads as follows:

Sec. XXXXXX. - Stormwater Construction Standards.

- (a) Any new development, redevelopment or substantial improvement of properties within the city shall be reviewed to assure compliance with the following minimum stormwater design criteria:
- (1) Unless otherwise specified by previous SFWMD permit, applied for or issued by the District prior to March 1, 2017, or currently effective district criteria, a storm event of a 3-day duration and 25-year return frequency shall be used in computing the minimum off-site discharge rates from non-publicly owned properties to the city's stormwater system. The stormwater conveyance system should be sufficiently designed so that the conveyance shall pass the design flow while ensuring that the backwater head does not exceed the proposed berms, walls or other containment systems in a twenty-five (25) year – 24-hour storm event. The side lot swales and other emergency conveyance facilities may be designed to pass the water forward to public rights-of-way.
 - (2) Unless otherwise specified by previous SFWMD permit, applied for or issued by the District prior to March 1, 2017, or currently effective District criteria, water quality standards shall be determined based upon selecting the most appropriate pollutant removal presumption to the corresponding BMP technique. The BMP guidelines used must meet a presumed pollutant removal of 85% total suspended solids, total nitrogen, and total phosphorus. BMPs that do not effectively remove total nitrogen and total phosphorus such as "dry detention" will be discouraged. Innovative approaches and low impact development techniques that reduce percent impervious are encouraged. Although reductions in storage volume may be given to BMPs that use "retention" and exfiltration, under no circumstances will the design storage volume be allowed to be less than half-inch (0.5") of retention storage volume nor less than 1.25-inch of dry detention storage volume (based on the total site area). The following special conditions shall apply in meeting the above standards:
 - 1) on single family residentially used lots no more than one-half-inch of detention or retention shall be stored underground in vaults, exfiltration pipes, or French drains;
 - 2) rainfall runoff from roof drains shall be included in the water quality calculations and in the conveyance calculations since roof water a major concern for release into the public MS4 system for flooding considerations. Directly connected impervious area is discouraged for this purpose.
 - 3) retention systems shall be designed with their bottom invert located no less than 18-inches above the wet season water table; exfiltration, and pervious pavement systems, shall be designed with their bottom invert located no less than 24-inches above the wet season water table;
 - 4) where special filtering materials are utilized, where swimming pools and patio areas are designed for storage or where special retention provisions are provided consistent with SFWMD criteria or consistent with chapter 62

of the Florida Administrative Code, the building official may credit such areas in computation of total on-site storage

(b) All implementation of stormwater improvements shall conform to the above standards and shall include compliance with the following special criteria:

(1) Plans and specifications signed and sealed by a licensed Florida professional engineer shall be submitted for review and approval prior to the issuance of city permits. The engineer shall provide on the plans under seal that the plans are for reliance by the city. Upon completion of construction of stormwater improvements, and prior to receiving a certificate of occupancy or completion, a certification with record document shall be submitted by the engineer stating that the work has been satisfactorily completed in accordance with the plans and specifications.

(2) Establishment, re-establishment or maintenance of swales within the abutting public street right-of-way shall be accomplished in accordance with the city's *Right-of-Way Construction Standards Handbook*, as amended from time to time.

(3) Stormwater discharge into a public alley is generally prohibited, unless the alley drainage system connects to a storm drainage trunk line, or to a roadway storm drainage network, or unless the alley drainage system includes sufficient capacity to handle the additional runoff from the proposed new connection.

(4) Roof gutters are required as an erosion control technique that also follow the philosophy of reducing directly connected impervious area and shall be installed on all buildings. However, in special cases, where the side yard widths are greater than 10-feet, the building official may allow an exemption if the roof directs less than 25% of the roof runoff to a side yard area, and erosion control is adequately addressed.

(5) Driveways and sidewalks shall be designed to minimize potential for increasing the runoff from private property into the city's stormwater system.

(6) The property owner shall maintain the stormwater system in accordance with the stormwater plan certified at the time of issuance of a certification of occupancy. The building official reserves the right to reject any BMP or innovative technique proposed to meet the goals of this article if the private property owner does not provide adequate assurance through a maintenance plan that the system will be effectively maintained in perpetuity.

(c) The environmental protection of downstream water bodies is vital to this article as part of the permit process. In rare instances where the existing property grades are insufficiently elevated, and drainage cannot flow back into the stormwater master system, then as a minimum, the city requires some form of pretreatment before discharge to the canal, lake, bay or other water body. Innovative BMPs shall be employed to accomplish this including (but not limited to); interceptor swales,

containment berms, rain gardens and interconnection into the seawall rock drain system.

(d) If the city inspector identifies deficiencies at a construction site that is not in compliance with the requirements of the city MS4 permit, the FDEP erosion and sediment control guidelines or this article, the contractor, developer, and property owner, shall each be individually subject to the following fines:

(1) Failure to implement or maintain sediment and erosion control structures: \$250.00 per violation per day.

(2) Discharging water exceeding turbidity requirements into the swales, storm sewer systems or surface waters: \$250.00 per violation per day.

(3) Failure to obtain or comply with an environmental resource permit, which results in the discharge of sediment onto private or public property: \$250.00 per violation. The City inspector may also suspend any future on-site inspections until the violations have rectified.

(4) In addition, any condition caused or allowed to exist in violation of this ordinance is a threat to public health, safety, and welfare, and is declared and deemed to be a nuisance, and may be summarily abated or restored at the violator's expense.