Improving the Stormwater Development Code

Streets & Stormwater Department
CBIA Zoom Meeting February 4, 2021

Background

City Efforts to Improve Flood Protection and Stormwater Quality

2007 SW Master Plan Update: $79M Projects & Programs

2007 – 2009: $5.7M expansion of the Basin III (Old Naples) SW system

2008 – 2011: $3.7 expansion of the Basin V SW system

2010: $3.8M upgrade of the Cove Stormwater Pump Station

2013: $3.9M upgrade of the Public Works SW Pump Station

2014: $1.1M upgrade of the Port Royal SW Pump Station

Background

City Efforts to Improve Flood Protection and Stormwater Quality

2018 SW Master Plan Update: $60M Projects & Programs

2018 - 23: $25M Basin II Beach Outfall Removal Projects

2015 – 2025+: $30M Lakes Restoration Projects

2019 – 2025+: Basin Assessments & Improvement Projects

2020 And Beyond…

Public / Private Partnership: Update SW Development & Utility Fee Code

11 Goals = Code Amendments

Sec. 16-51

Sec. 16-115

Sec. 30-339

Chapter 30, Article VIII

Sec. 30-8

Sec. 50-76

GOAL #1

The Goal:

- Increase the number of properties with stormwater management systems to reduce flooding and improve water quality throughout the City.

To Achieve the Goal:

- Revise the definition for re-development, as found in the Code of Ordinances Section 16-51.- Definitions.
- Include a definition for a life cycle improvement.
- Include definitions of permeable pavement and as-built survey.

Proposed Wording #1

Re-development is any ~~construction~~ activity on a ~~site~~ property, ~~where the aggregate of actions and/or costs to reconstruct, modify, alter, or improve the property,~~ whether in one phase or in multiple phases, that: (1) is a life cycle improvement for the property; (2) increases the impervious area of the property; (3) changes the existing site to increase stormwater runoff; (4) or changes the site stormwater flow characteristics resulting in an adverse impact to adjoining or downstream properties. ~~are anticipated to do any of the following: (1) increase the appraised value of the property more than 50 percent of its current appraised value: (2) replaces the existing building or reconstructs more than 50 percent of the area under existing roof; (3) raises more than 50 percent of the existing finished floor; or (4) modifies the existing site grading sufficiently to warrant concern that the new activities could create problems for offsite or adjacent property.~~

Life cycle improvement means a change that: (1) increases the inhabited area or the garage area; (2) replaces two or more exterior walls; (3) is a minimum of ten percent of the assessed improvement value, or a minimum of $50,000, whichever is greater.

Proposed Wording #1 (continued)

Permeable pavement system is a pavement system designed by a Florida licensed professional engineer to infiltrate and store rainfall and stormwater runoff while also supporting vehicular and/or pedestrian traffic. Permeable pavement systems generally include up to five material layers: (1) a surface of permeable pavement materials; (2) a gravel bedding coarse; (3) a stone choker coarse; (4) a stone reservoir base coarse; and (5) a soil subgrade with an infiltration rate of no less than 2-inches per hour to allow for percolation.

As-built survey is a survey, signed and sealed by a Florida licensed professional land surveyor, of existing site infrastructure and improvements to obtain dimensional and vertical data, so that constructed improvements may be located and delineated. The survey is carried out during, or immediately after, a construction project for the record, completion evaluation, and payment purposes. For a stormwater management system, the as-built survey will include, but is not limited to the elevations, heights, depths and locations of: (1) discharge structures; (2) grates; (3) inverts; (4) walls; (5) berms; and (6) swales.

Goal #2

The Goal:

- Clarify that the minimum stormwater design criteria must be met for new development, redevelopment, or substantial improvement.

To Achieve the Goal:

- Provide for three exemptions.
- Set five triggers for review by the City.
- Set three triggers for meeting the stormwater technical criteria, special conditions, and special criteria, as found in the Code of Ordinances Section 16-115.

Proposed Wording #2

This section does not apply to: 16-115 (a)

(a) This section does not apply to:

(1) Properties with an existing permitted, and properly functioning stormwater management system, ~~that do not apply for~~ unless an activity on the property requires a permit application as listed in (b) below and the activity increases the impervious area of the property. An increase in impervious area will require the stormwater management system to meet the technical criteria for water quality/storage in effect at the time the system was originally constructed to accommodate the additional impervious area.

(2) Properties regulated ~~permitted~~ by the Florida Department of Environmental Protection or the South Florida Water Management District.

(3) Historic buildings as defined in Section 16-116, provided any activity on the historic building will not preclude the building's continued designation as a historic building. Instead of "that do not apply for", would it be better to say "unless an application is made for"

Proposed Wording #2

Five Triggers for Review by the City, 16-115 (b)

(b) Any activity on a property within the City of Naples which requires an application for a new construction permit, an addition/alteration permit, a driveway permit, a site work permit, or a pool permit will be reviewed by the City Manager's designated representative to determine whether the activity constitutes new development , redevelopment, or substantial improvement as defined in Section 16-51.

Three Triggers for Meeting the Stormwater Technical Criteria, Special Conditions, and Special Criteria, 16-115 (c)

(c) Any new development, redevelopment, or substantial improvement of a property within the City of Naples must comply with the minimum stormwater design technical criteria, special conditions, and special criteria which follow below:

Goal #3

The Goal:

- Capture additional site runoff and reduce flow to the public stormwater system.

To Achieve the Goal:

- Increase the required water quality/storage criteria to a retention storage volume to 1.0 inch and a detention storage volume to 2.5 inches for properties with greater than 40% impervious area, as found in the Code of Ordinances Section 16-115.
- Note: The water quantity/conveyance criteria have not been changed.

Proposed Wording #3

Minimum Stormwater Design Technical Criteria, 16-115 (c) (1)

b) Water Quality/Storage Criteria: The water quality/storage criteria are intended to meet or exceed the presumed pollutant removal efficiencies of the South Florida Water Management District (SFWMD) technical publication “Best Management Practices for South Florida Urban Stormwater Management Systems”.

1) For properties that propose new development, redevelopment, or substantial improvement, the design storage volume will not be less than 0.5 inch of retention storage volume, nor less than 1.25 inches of detention storage volume when the property maintains 40 percent impervious area or less.
2) For new development, redevelopment, or substantial improvement resulting in greater than 40 percent impervious area, the design storage volume will not be less than 1.0 inch of retention storage volume, nor less than 2.5 inches of detention storage volume.

Goal #4

The Goal:

- Capture additional site runoff from impervious areas and encourage permeable greenspace.

To Achieve the Goal:

- Include rainfall runoff from roof drains in the water quality calculations, disregard permeable greenspace area from the water quality calculations, and allow permeable pavement systems in the design of a stormwater management system, as found in the Code of Ordinances Section 16-115.
- Retention systems may be 12” above the wet season water table, reduced from 18”
- Permeable pavement systems may be 18” above the wet season water table, reduced from 24”.

Proposed Wording #4

Special Conditions, 16-115 (c) (2)

a) Retention and exfiltration systems must be built over materials with an infiltration rate of no less than 2-inches per hour to allow for percolation. Compacted limerock and similar materials used to support structures are not considered permeable.
b) The permeable greenspace area of a site will be included in the conveyance/quantity calculations.
c) The permeable greenspace area of a site may be disregarded from the storage/quality calculations.
d) Permeable pavement systems may be used in the design of a stormwater management system, but the area of the permeable pavement system will not be disregarded from the conveyance/quantity calculations, nor the storage/quality calculations.
e) Retention systems must be designed and located no less than 12-inches above the wet season water table. Permeable pavement systems must be designed to be a minimum of 18 inches above the wet season water table.

Goal #5

The Goals:

- Improve the quality of runoff from private property.

To Achieve Goals:

- Strengthen the criteria for the plans and specifications for stormwater management systems, for the re-establishment of the public right-of-way (including swales), for roof gutters, for front-yard paved areas, and maintenance of stormwater management systems, as found in the Code of Ordinances Section 16-115.

Proposed Wording #5

Special Criteria, 16-115 (c) (3)

a) Plans and specifications for stormwater management systems will be signed and sealed by a ~~an appropriate~~ Florida licensed ~~design~~ professional ~~shall~~ and will be submitted for review and approval by the City Manager's designated representative prior to the issuance of a ~~city~~ permit. The City Manager's designated representative will conduct inspections of stormwater improvements. Upon completion of the construction, and prior to receiving a certification of occupancy or completion, a certification with an as-built survey ~~record documents shall~~ will be submitted by a licensed ~~design~~ professional stating that the work has been satisfactorily completed in accordance with the plans and specifications.

b) The public right-of-way adjacent to the property, including swales, will be re-established in accordance with the City's Right-of-Way Construction Standards Handbook.

An as-built ~~topographical~~ survey of the right-of-way adjacent to the property, will be submitted with elevations to allow a Florida licensed ~~design~~ professional to demonstrate that the drainage facilities, including ~~existing~~ swales are capable of ~~is sufficiently adequate to~~ receiving and conveying stormwater.~~, or a Florida licensed design professional will provide a design to restore or re-establish the right-of-way swale.~~ Driveway connections ~~through a swale~~ to the street will not impede the City's ~~be designed to maintain the swale's~~ stormwater conveyance system ~~capacity~~.

~~The City Manager's designated representative must approve~~ Work in the public right-of-way will have an approved ~~through a~~ Right-of-Way permit prior to construction. The City Manager's designated representative must inspect and approve the construction of swales, driveways, and other work performed within the public right-of-way prior to passing the stormwater final inspection and prior to closing the right-of-way permit.

Proposed Wording #5 (continued)

c) ~~Prohibition of~~ Stormwater discharge into a platted alley is prohibited unless a drainage conveyance system exists within the alley with sufficient surplus capacity to handle the ~~quantity of~~ runoff proposed for discharge to the alley.
d) Roof gutters are required as an erosion control technique, as a means to prevent stormwater from adversely affecting adjacent properties, and as a means to convey stormwater to the site's stormwater treatment system. If a building is ten feet~~,~~ or less from a property line, a roof gutter must be installed on that side of the building within ten feet of the property ~~facing the side lot~~ line. If a building is greater than ten feet from the property line, and gutters are not installed, the total volume of roof top runoff directed to any side yard must be less than 25 percent of the total roof runoff ~~to each side yard area~~, and erosion control must be adequately addressed. Roof runoff collected by gutters must be directed to the stormwater management system designed for the site. All roof gutters must be appropriately sized for the roof top receiving area. Roof gutter design calculations must be included with the stormwater management system design calculations and the installation will be verified during a City site inspection. Roof gutter design guidelines ~~requirements~~ are included in the Stormwater Standards Handbook.

Proposed Wording #5 (continued)

e) Runoff from impervious areas on the property, including driveways to the property line, ~~in the front-yard set-back area~~ must be directed to the on-site stormwater management system.

f) Paved areas within the front-yard set-back will be designed to comply with the following criteria:

1) No more than thirty percent of the front-yard set-back will be impervious area.
2) Up to fifty percent of the front-yard set-back may be a paved area, provided that:
    A) A minimum of fifty percent of the front-yard set-back will be landscaped permeable greenspace.
    B) No more than ten percent of the front-yard set-back may be impervious area.
    C) Up to fifty percent of the front-yard set-back may be paved area that is designed as a permeable pavement system.

g) The property owner ~~shall~~ must maintain the stormwater system in accordance with the stormwater plan certified at the time of issuance of a certification of occupancy or completion and have the system inspected in accordance with code Section 30-340 (a) (4).

Proposed Wording #5 (continued)

h) The ~~building official~~ City Manager's designated representative reserves the right to reject any BMP or innovative technique proposed to meet the goals of the ordinance if the applicant does not provide adequate assurances through a maintenance plan that the system will be effectively maintained ~~in perpetuity~~ for the life of the stormwater management system.

~~i) The environmental protection of downstream water bodies is vital to this ordinance as part of GOAL "A" conveyance/quantity.~~ In rare instances where an existing property has elevations that will not grade back into the required stormwater master system, then as a minimum, ~~the city requires~~ some form of pretreatment is required before discharge to a ~~the~~ canal, lake, bay or other water body. Innovative BMPs ~~shall~~ must be employed to accomplish this including (but not limited to): interceptor swales, containment berms, rain gardens and interconnection into the seawall rock drain system.

Goal #6

The Goal:

- Encourage permitted stormwater management systems to be properly operated and maintained.

To Achieve the Goal:

- Revise the Code of Ordinances Section 30-340 to:
  - Eliminate credits onto the stormwater utility bill for meeting the development requirements.
  - Establish credits onto the stormwater utility bill, including the use of BMPs above the requirements of the technical criteria.
  - Establish a surcharge onto the stormwater utility bill if the stormwater management systems is not maintained.
  - Allow a request for an adjustment of the credit or surcharge, as provided in Section 30-339.

Proposed Wording #6

Credit and surcharge for permitted stormwater management systems, 30-340

a) The following criteria must be met by the stormwater utility customer in order to receive a credit, and to avoid a surcharge, onto the property's ~~on-site~~ stormwater utility bill ~~fee credit~~:

(1) The stormwater facilities have been permitted by the South Florida Water Management District (SFWMD), the Florida Department of Environmental Protectection (FDEP), or ~~approved by~~ the ~~city manager~~ City of Naples.

~~(2) The stormwater utility customer requesting the credit demonstrates to the city manager, on or before every third year anniversary after the granting of the credit that said stormwaterfacilities. are operating properly and being maintained according to standard practices The demonstration shall include, at a minimum, photographs of the subject stormwater facilities during the year prior and a signed affidavit by aprofessional civil engineer registered in the State of Florida that the facilities have been operated properly and maintained operating according to, standard practices~~

(2) A credit onto the stormwater utility bill may be approved by the City Manager's designated representative up to 25 percent for permitted stormwater management systems that exceed the water quality volume minimum requirement by 25 percent.~~, or adds Best Management Practices (BMPs) that demonstrate a 25 percent improvement in pollutant removal efficiency.~~ A credit to the stormwater utility bill may also be approved by the City Manager's designated representative for implementing a Best Management Practice (BMP) defined in the most recent update to the City's Stormwater Standards Handbook. A combination of water quality volume and BMPs that quantitatively demonstrate equivalent water quality benefit may also receive up to a 25 percent credit onto the stormwater utility bill. Properties must also complete the required anniversary inspection, or the credit will be discontinued.

Proposed Wording #6 (continued)

(3) Properties that have a noncompliant stormwater management system will be subject to a surcharge onto the property's stormwater utility bill. A noncompliant system is a system that has been altered to its detriment, has not completed the required anniversary inspection, or has not been repaired within 45 days after notification by the City. The surcharge onto the stormwater utility bill will be 50 percent of the site's total stormwater utility fee, but not less than $100 per month, nor greater than $1,000 per month. The City Manager's designated representative will impose the surcharge from the date the City becomes aware of any noncompliance and will end when the noncompliance has been corrected, as determined through a City inspection .

(4) Single family home stormwater utility customers must complete an inspection of the stormwater management system on, or before, every fifth-year anniversary of the prior certification of the system. All other stormwater utility customers must complete an inspection of the stormwater management system on, or before, every third-year anniversary of the prior certification of the system. The inspection will include a report signed and sealed by a Florida licensed design professional. The inspection report must confirm the stormwater management system remains consistent with, and is operating according to, the permitted design requirements. The stormwater utility customer must repair any deficiencies found as a part of the inspection.

(b) A request for an adjustment to the credit, or the surcharge, amount may be made in accordance with Section 30-339 of the Code of Ordinances.

Proposed Wording #6 (continued)

Adjustment of fees, credits, and surcharges, 30-339

(a) Request for adjustments of or exemptions to the stormwater management utility feemay be submitted to the city manager, who is given the authority to develop and administer the procedures and standards for the adjustment or exemption of fees, credits, or surcharges. All requests will ~~shall~~ be judged on the basis of ~~the amount of impervious area on developed parcels, the total area of vacant parcels, and/or the amount of stormwater discharged from the property~~ compliance with Sections 16-115 and 30-340 of the code of ordinances. The following procedures will ~~shall~~ apply to all adjustment requests of the stormwater fee, credits, surcharges:

(1) Any owner who has paid such owner's utility fees, credits, or surcharges and who believes the utility fee to be incorrect may, subject to the limitations set forth in this article, submit an adjustment or exemption request to the city manager.

(2) Adjustment or exemption requests for the utility fees, credits, or surcharges which have been paid by an owner will ~~shall~~ be made in writing setting forth, in detail, the grounds upon which relief is sought.

(3) The owner requesting the adjustment or exemption may be required, at such person's own cost, to provide supplemental information to the city manager, including but not limited to survey data approved by either a registered professional land surveyor (RPLS) and engineering reports approved by a professional engineer (PE). Failure to provide such information may result in the denial of the adjustment request.

(~~4~~) Adjustments or exemptions to the utility fee will be made upon the granting of the request, in writing, by the city manager. Denials of requests will ~~shall~~ be made in writing, by the city manager.

Proposed Wording #6 (continued)

(b) Upon receipt of the written denial of the adjustment or exemption request, the owner who initially requested the adjustment or exemption may, within 15 ~~30~~ days of receipt of such denial, appeal to the city council for review of the denial.

(1) The city council will ~~shall~~ complete their review within 90 ~~30~~ days of receipt of the request for review. The city council's determination on the review will ~~shall~~ be in writing and will ~~shall~~ set forth in detail the reasons for its decisions.

(2) In reviewing denials of requests, the city council will ~~shall~~ apply the standards and review criteria contained in this section.

Goal #7

The Goal:

- Improve the landscaping standards for new single-family and two-family dwellings.

To Achieve the Goal:

- Update the applicability and required plantings for landscaping in the Code of Ordinances Section 50-76.

Proposed Wording #7

Landscaping standards for new single-family and 2-family dwellings, 50-76.

(a) *Applicability.* The minimum standards for landscaping set forth in this section are applicable to the construction of a new single-family or 2-family dwelling. A landscape plan, prepared by a design professional, indicating compliance with this section will be required as part of the building permit review. These minimum standards ~~and~~ ~~shall~~ must be complied with prior to the issuance of a certificate of occupancy by the building official, as certified by the design professional. ~~Excluded from this section are buildings, sidewalks, driveways and other impermeable surfaces.~~

(b) *Plantings required.* Any part of the site which is not designed for use of buildings, sidewalks, and driveways or is otherwise an allowable impermeable surface ~~shall~~ must be planted with sod or a combination of sod, mulch, trees and landscaping material. All required front yards must be planted with a minimum 70 % of trees, shrubs, and ground cover. If front yard driveways and sidewalks are constructed with a permeable pavement system, in accordance with Section 16-115, front yards must be planted with a minimum 50 % of trees, shrubs, and ground cover. Impervious coverage in required front yards will be limited according to Section 16-115.

Proposed Wording #7 (continued)

(c) *Barren soil prohibited.* No area ~~shall~~ will be maintained with barren soil or sand except for planting beds and areas around trees or plants.

(d) *Use of rocks, shell or similar matter.* Rocks, stone, shell, gravel or similar matter ~~shall~~ will not be used for more than 10 percent of a front yard except for planting beds and areas around trees or plants.

Moving Forward

1. Presentation at the February 10, 2021 meeting of the PAB;
2. Presentation at the February 16, 2021 City Council Workshop;
3. Present code amendments at a 1st and 2nd reading before City Council;
4. Amendments to take effect 90-calendar days from City Council's 2nd reading.

Comments & Questions

Comments and questions may be directed to:

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