TMaPS: VOLUME 8

REGULATORY REVIEW

CITY OF TALLAHASSEE

Prepared for

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Tallahassee, Florida 32301

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Project Number: FW7714

May 2024

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The engineering material and data contained within the enclosed report was prepared by Geosyntec Consultants, Inc. for sole use by the City of Tallahassee. This report was prepared under the supervision and direction of the respective undersigned, whose seal as a registered professional engineer is affixed below.

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Tallahassee Master Plan – Surface Water (TMaPS)

Volume 1: Executive Summary

Volume 2: Background & Approach

Volume 3: Lake Munson Basin

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Volume 5: Lake Lafayette Basin

Volume 6: Wakulla Springs and Lake Talquin

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ACRONYMS AND ABBREVIATIONS

BAM	Biosorption Activated Media
BMAP	Basin Management Action Plan
BMP	Best Management Practices
CGP	Construction Generic Permit
CN	Curve Number
CURG	Citizens United for Responsible Growth
DCIA	Directly Connected Impervious Area
EMO/EMA	Environmental Management Ordinance/Environmental Management Act
ERP	Environmental Resource Permit
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FFL	Florida-Friendly Landscaping
FYN	Florida Yards and Neighborhoods
LAVA	Leon County Aquifer Vulnerability Assessment
LDC	Land Development Code
LDR	Land Development Regulations
mg/L	milligrams per liter
MMTD	Manufactured Treatment Devices
MS4	Municipal Separate Storm Sewer Systems
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NWFWMD	Northwest Florida Water Management District
OFW	Outstanding Florida Waters
PSPZ	Primary Spring Protection Zone
PUD	Planned Unit Development
SCS	Soil Conservation Service
SFMP	Stormwater Facilities Master Plan
TMaPS	Tallahassee Master Plan - Surface Water
TMDL	Total Maximum Daily Load

TN	Total Nitrogen
TND	Traditional Neighborhood Development
TP	Total Phosphorus
USDA	U.S. Department of Agriculture
VC	Village Center
WMD	Water Management District

8 Regulatory Review

8.1 Introduction

The City of Tallahassee recognizes the need to evaluate and update stormwater regulations to ensure that the quality of stormwater discharged is sufficient to prevent further degradation of surface water resources. While the City's volume-based design standards for new development should be commended, stormwater regulations related to water quality are moving to performance-based standards. This is a priority within the State of Florida, evidenced through the passage of SB712 (Clean Waterways Act) in 2020, which directs the Florida Department of Environmental Protection (FDEP) and the water management districts to update and improve stormwater design criteria to use the most recent scientific information, consider and address low-impact design best management practices, and design criteria that increase the removal of nutrients from stormwater discharges, and measures for consistent application of the net improvement performance standard to ensure significant reductions of any pollutant loadings to a waterbody. Much of the direction provided within the Clean Waterways Act was part of the FDEP draft 2010 Stormwater Rulemaking effort, which was based on the 2007 Harper & Baker evaluation of Florida's stormwater design criteria. Even though, the 2010 rulemaking effort stalled prior to implementation, multiple Florida municipalities and Counties adopted similar performance-based standards using the approach of Harper & Baker.

As development continues to occur within watersheds containing impaired waters and total maximum daily load (TMDLs), it is essential that the City update its stormwater regulations; particularly those which have the potential for the greatest impact. Development without sufficient stormwater treatment standards will mean that taxpayers, not the entity creating the pollutant loading, will be responsible for retrofitting these inadequate stormwater management systems. Although it is likely the State of Florida will soon update and implement improved stormwater design criteria in response to the Clean Waterways Act, the City should continue its position as a leader in environmental stewardship and cease to allow inadequate practices and move to adopt improved stormwater management standards.

This document is a summary report of the review and includes the following information:

- All applicable local code and regulation citations reviewed (both current and draft);
- A description of the current and proposed techniques aimed at reducing the stormwater impacts of new development and areas of significant redevelopment that are included within the applicable codes and regulations;
- A description of innovative stormwater planning techniques, including those described above, recommended for possible future incorporation into the codes and regulations (beyond what may be currently in draft).

8.2 Applicable Legal Authorities Reviewed

The following City of Tallahassee legal authorities were reviewed to identify opportunities to further reduce the stormwater impacts of new development and areas of significant

redevelopment, and to promote the use of Low Impact Development (LID) principles and Best Management Practices (BMPs):

- Comprehensive Plan (January 11,2021)
- Code of Ordinances (October 22, 2020)
- Land Development Regulations (May 22, 2020)
- Resiliency Plan (July 2019)
- Five Year Strategic Plan 2024
- Fertilizer Ordinance (2009)

8.3 Tallahassee-Leon County 2030 Comprehensive Plan

This section of the Summary Report contains the results of the review of the Tallahassee-Leon County 2030 Comprehensive Plan. The purpose of the review is to identify Goals, Objectives, or Policies that can be revised to improve the effectiveness of the City's MS4 Stormwater Management Program as discussed above. The review identifies potential revisions of the current language that will further reduce the stormwater impacts of new development and areas of significant redevelopment.

The Comprehensive Plan consists of the following elements:

- Introduction
- Future Land Use Element and Addendum
- Mobility Element
- Utilities Element
- Conservation Element
- Parks and Recreation Element
- Historic Preservation Element
- Intergovernmental Coordination Element
- Capital Improvements Element and Schedule
- Economic Development Element
- Public School Facilities Element
- Plan Monitoring and Evaluation Procedures
- Glossary

Each of the elements above were included in the review although comments were not made on several of the elements. Comments are provided only for components of the Plan applicable to the City of Tallahassee.

Note: Where specific language is being recommended for revisions, word additions are shown in red font and suggested deletions are shown in strike through font (i.e., stormwater management ~~drainage~~).

8.3.1 Chapter I. Future Land Use Element

GOAL 1, OBJECTIVE 1.1

Policy 1.1.5:

Future Land Use Map densities and intensities are intended to reflect the availability of capital infrastructure. Capital infrastructure, which supports higher land use densities and intensities, consists of sewer and water, roads, mass transit, solid waste, stormwater management ~~drainage~~, and parks.

Comment: Drainage only considers stormwater quantity and flood protection. Stormwater management is the more recent terminology since it encompasses stormwater flood control and stormwater treatment.

Objective 1.2:

Coordinate the location of land uses with local soil conditions, topography, and aquifer vulnerability as well as available services.

Comment: This objective, and its supporting policies, are excellent. They implement one of the primary tenets of "designing with nature" and low impact development.

Policy 1.2.4:

By 2010, local government shall adopt in the Land Development Regulations a mapped Primary Spring Protection Zone for Wakulla Springs based on the Leon County Aquifer Vulnerability Assessment. Accompanying land development regulations for the Primary Spring Protection Zone (PSPZ) shall be developed as indicated in Policy 4.2.5 of the Conservation Element to aid in the protection of Wakulla Springs. These efforts shall be coordinated with Wakulla County.

Comment: Springs Protection Zone is in Chapter 10, Zoning, specifically Section 10-307. Subsection (c), Development Standards, states "All development within the PSPZ shall be executed in accordance with special development and design standards identified below." However, it does not appear that these have been adopted.

Objective 1.4, Policy 1.4.12

(c) Site Plan and PUD requirements shall minimize impacts to the natural environment resulting from urban sprawl by not only identifying and protecting environmentally sensitive lands, but just as importantly by limiting urban sprawl into less environmentally sensitive lands through the

implementation of compact and efficient urban development and redevelopment that incorporate Low Impact Development principles and BMPs, where applicable.

Comment: LID principles and BMPs are especially relevant and useful tools for PUDs allowing integration of open space, landscaping, and BMPs.

BRADFORDVILLE MIXED USE DEVELOPMENT PATTERNS (applies to Bradfordville Study Area Only)

Objective 1.7:

The Comprehensive Plan provides an overall vision for the community. The arrangement of land uses is a major factor in achieving this vision. Within the Bradfordville Mixed Use Future Land Use Category, land uses may be further separated to achieve efficient and environmentally sound development patterns and to promote the Plan's overall vision. This objective and its policies describe the development patterns associated with the Bradfordville Mixed Use Future Land Use Category.

Comment: This Objective was adopted in 2007, before the concepts of low impact development had come to Florida. However, accomplishing the purposes of this Objective and its associated Policies are fully compatible with LID principles and BMPs. The City and County should promote LID principles and BMPs in its LDRs as this area continues to develop and even redevelop.

Objective 2.2: Future Land Use Map Categories

Policy 2.2.1: Rural/Agriculture

SPECIAL CONDITIONS

The following special conditions shall apply to the Rural future land use category:

3. Non-residential and light infrastructure development shall be subject to design standards that preserve the scenic and rural character of this category and protect existing rural residential development from offsite impacts of non-residential development. Design standards shall include, but not be limited to, signage, lighting, parking, landscape buffers, ~~and~~ building materials, and encouraging the use of LID principles and BMPs.

Comment: Promote LID.

Policy 2.1.3

Require clustering of residential units and encourage the use of LID principles and BMPs on non-environmentally significant portions of parcels where conservation or preservation overlay districts exist elsewhere on the site. Net density on parcels where clustering is required on the developable portion of the parcel where the units are clustered shall not exceed double the allowable density for the land use category in which the parcel is located.

Comment: LID principles and BMPs are especially relevant and useful tools when clustering is used since they allow integration of open space, landscaping, and BMPs.

Policy 2.2.4: Village Mixed Use

Traditional neighborhood development regulations shall include specific criteria to ensure that development in this category results in walkable, mixed-use neighborhoods that satisfy a variety of housing needs and provide easy access to goods and services. The regulations shall require: A minimum of 40 acres per project unless the proposed project compatibly integrates with existing development abutting the project to establish an effective area of at least 40 acres that is consistent with traditional neighborhood development standards;

- A high degree of connectivity;
- Flexible greenspace requirements;
- Design and amenities that facilitates pedestrian access throughout each development;
- Minimum densities that are consistent with the Village Mixed Use Intensity Guidelines;
- Maximum setback requirements and standards that orient entrances and windows toward streets and pedestrian facilities;
- Encourage the use of LID principles and BMPs for improved site design and stormwater management.
- A mix of uses that is consistent with the Village Mixed Use Intensity Guidelines; and
- Requirements for public spaces that are readily accessible by pedestrians.

Comment: LID principles and BMPs are especially relevant and useful tools for mixed use developments since they allow integration of open space, landscaping, and BMPs.

Policy 2.2.18: Lake Protection

The intent of the Lake Protection category is to ensure that development within the Lake Jackson basin occurs in a sustainable and environmentally sound manner with minimal impact to water quality. Accordingly, the of use of low impact development principles and BMPs are encouraged. The Lake Protection category is the basis for regulation and, where appropriate, limitation of development and redevelopment of land within the Lake Jackson Basin. The bounds of this category are to be the Lake Jackson basin boundary adjusted to include contributing watersheds but excluding existing, more intensely developed areas south of Interstate 10 and areas outside the Urban Service Area.

Comment: Promote LID.

Policy 2.2.20: Agriculture/Silviculture/Conservation

(F) The following site plan and design criteria are incorporated into the overall PUD:

(1) Parking is buffered from the adjacent roadways;

(2) Clustering of buildings and parking areas is utilized; and

(3) A maximum of 10,000 square feet per structure not to exceed 50,000 gross square feet in total of non- residential is provided; and

(4) Asphalt/concrete areas are minimized by using pervious pavements and/or providing grassed overflow parking, etc.; and

(5) A limitation to a maximum of 30% total impervious area is utilized; and

(6) Maximum building height is limited to two (2) stories; and

(7) The overall PUD site is limited to one access entrance to the arterial roadway and one access to the collector roadway and provides internal connection to the overall parent parcel; and

(8) There is an architecturally consistent theme that reflects the regional plantation vernacular

throughout the development; and

(9) The development incorporates an overall infrastructure plan (sewer, water, stormwater management, fire, sheriff, garbage, etc.) designed to serve the proposed development without extending existing services; and

Comment: Promote pervious pavement alternative and add stormwater to infrastructure.

Objective 10.1: Southeast Sector Plan

Policy 10.1.2: SESP Implementing Land Use Districts

Development in the VCs may obtain a waiver from the requirements In the Environmental Management Ordinance/Environmental Management Act (EMO/EMA) for natural area, landscaping and buffers as long as a landscape plan is prepared that meets established minimum requirements provided it is consistent with the requirements in the Comprehensive Plan. Stormwater management ~~detention and treatment~~ facilities for TNDs and VCs shall be designed in accordance with applicable standards, shall encourage low impact development principles and BMPs, and shall be located outside of a TND or a VC in order to promote a compact pedestrian-oriented arrangement of land uses, except in situations where alternative sites for stormwater facilities are available that are consistent with the intent of the VC district.

Comment: Increases stormwater design flexibility and promotes LID. Why the requirement that stormwater facilities shall be located outside of a TND or VC? Does this preclude the use of a large wet detention system serving as a "water focal point" within a TND or VC? This is how the Town of Celebration was developed. The Sector Plan developed for St. Joe Development in Bay County also promotes this concept in Village Centers. The wet detention "lakes" provide flood control for the surrounding development while on-site LID BMPs provide for from 50% to 100% of the stormwater treatment, depending on the treatment provided by the wet detention system. Its treatment efficiency can be increased by adding stormwater harvesting and using the water for irrigation in the Village Center. Same comment for TND section in 10.1.1(B) and 10.1.1(I) Southwood Town Center.

Policy 10.1.8: Agriculture and Silviculture Uses

Prior to subdivision or site plan approval, agriculture and silviculture uses shall be allowed to continue within the Southeast Sector Planning Area in accordance with "2008 ~~1993~~ Silviculture Best Management Practices," Florida Department of Agriculture and Consumer Services, or its successor, and existing local government ordinances.

Comment: Update legal reference.

Policy 11.3.6:

By 2004, develop a plan and funding mechanisms to retrofit existing stormwater capacity problem areas within the Southern Strategy Area, and amend the comprehensive plan accordingly in the next available plan amendment cycle after retrofit plan adoption. Offer subsidized regional stormwater capacity through regional ponds for new and rehabilitated developments in the Southern Strategy Area.

Comment: Was this ever implemented?

Goal 13: Welaunee Critical Area Plan

(7) Specific guidelines and requirements for land use categories, transportation, access management, and other specific design standards shall be included in one or more PUD Concept Plans applicable to the Toe or Heel, respectively. Each PUD Concept Plan shall be adopted by the local government with jurisdiction before any development may take place on the parcel or tract included in the PUD Concept Plan, except as otherwise allowed pursuant to Policy LU 6.2.4. Each PUD Concept Plan shall be consistent with development guidelines and general design standards herein. Low impact development principles and BMPs shall be encouraged.

Comment: In this day and age, future large-scale developments should strongly encourage the use LID principles and BMP to increase site design flexibility and better stormwater management.

Policy 13.1.3: Land Use (B) Town Center

Stormwater management facilities shall be located outside of town centers to promote a compact, pedestrian-oriented development pattern except where alternative sites for stormwater facilities are not reasonably available. Community open space in the form of public squares and greens shall be planned as a focal point for a town center. No minimum on-site open space shall be required on each preliminary plat.

Comment: As discussed previously, why not allow large wet detention "lakes" to serve as a water amenity and focal point? Why not allow LID BMPs to be used on-site for partial or full stormwater treatment and use the "lake" for detention flood control. Treatment can be added to the lake by stormwater reuse or by upflow filters with BAM at the discharge. Also, same language in Policy 13.2.7: Development Standards for Mixed-Use Zones.

Policy 13.1.5: Public Facilities

(2) All stormwater management facilities shall be designed to meet the stormwater treatment performance standard for Outstanding Florida Waters (OFW) (i.e.-95% average annual load reduction of pollutants as set forth in Section 62-40.432, F.A.C. ~~the first .75 inches of rainfall)~~ or the applicable local standard, whichever is greater. Maintenance responsibility for all stormwater management facilities shall be provided as established in the Stormwater Facilities Master Plan and the Urban Services Agreement. Facilities which are dedicated to the City must be constructed to City standards.

Comment: Since the City is applying the OFW performance standard, then the level of treatment should be stated, not a treatment volume which varies with many factors. Encouraging LID principles and BMPs provide stormwater engineers and site planners with greater flexibility in meeting the required level of stormwater treatment.

(10) Prior to approval of the first PUD Concept Plan on the Toe or the Heel, except as allowed by Policy LU 6.2.4, a Stormwater Facilities Master Plan (SFMP) shall be prepared by the applicant and approved by the local government for the entire Toe and the entire Heel. The SFMP shall accommodate stormwater flows from full build out conditions from any upstream offsite property and the entire Toe or the entire Heel, as applicable. The SFMP shall, at a minimum, identify regional impacts to flood extents and stormwater conveyance, establish infrastructure requirements necessary to manage stormwater in compliance with local, state and federal regulations, document the phasing, implementation and easement reservations necessary to serve full build-out and facilitate environmental and stormwater permitting. To accomplish these goals, the SFMP shall provide analysis and design of the primary stormwater system based on detailed hydrologic and hydraulic modeling of existing and post-development conditions. The analysis shall incorporate existing land use, soils and topographic data, the conceptual land use plan, stage and water quality monitoring data and the applicable results and findings of the Natural Features Inventory and Environmental Impact Assessment. Pre-development and post-development stormwater TN and TP average annual loadings shall be calculated using the BMPTRAINS software or similar accepted methodologies. The design shall provide general parameters associated with the primary stormwater management facilities, drainage easements and conservation easements necessary to serve the development under full build-out conditions. Flood extents delineated by the SFMP shall allow identification of the 100-year flood exclusion area. No habitable structures shall be constructed within the post- development (full build-out) 100-year floodplain. The SFMP's scope of work shall be approved by local government prior to development of the SFMP.

Comment: Require stormwater pollutant loading calculations to demonstrate the required level of treatment is being is met. Also allows City to report load reductions in MS4 permit Annual Report.

Policy LU 13.1.6: General Design Standards

PUD Concept Plans shall incorporate design standards that will insure and guide mixed-use, integrated development that is pedestrian friendly. In addition to the general design standards set

forth in other policies, which support Land Use Objective 13.1, PUD Concept Plans shall be consistent with these general design standards:

(8) Landscaping in common areas, residential areas, along roadways and in town, neighborhood and employment centers shall use only drought-resistant native plant species in an approved plant list established in PUD Concept Plans.

(9) Landscaping in town centers, neighborhood centers, employment centers and residential areas located within a one-quarter mile walking distance of those centers shall include street trees identified in an approved plant list established in PUD Concept Plans.

(10) Stormwater management facilities shall be designed consistent with the City of Tallahassee and Leon County Land Development Codes, as applicable. ~~the "Stormwater and Erosion and Sediment Control Best Management Practices for Developing Areas" as described in Chapter 6 of the FDEP Florida Development Manual,~~ Appendix F of the Concurrency Manual and subject to local government approvals. During construction, sediment and erosion control BMPs shall be required to retain sediment on-site as specified in Part IV of the ERP Applicant's Handbook Volume I (Chapter 62-330, F.A.C.) and the Florida Stormwater Erosion and Sedimentation Control Inspectors Manual, Florida Department of Environmental Protection (latest edition) ~~Chapter 8 of the "Erosion and Sediment Control Handbook" (Goldman, Jackson, Bursztynsky).~~

Comment: Update references.

Policy 13.1.8: Agricultural and Silvicultural Activities

(3) Prior to subdivision or site plan approval, agriculture and silviculture uses shall be allowed to continue within the Toe and Heel in accordance with the "2008~~0~~ Silviculture Best Management Practices" as may be amended from time to time, Florida Department of Agriculture and Consumer Services, and existing local government ordinances.

Comment: Update reference.

Policy 13.2.12: Landscaping.

All landscaped areas, except athletic playing fields and golf course fairways and greens, shall be designed in accordance with the principles of Florida-Friendly Landscaping and shall utilize drought-resistant native plant materials from the "Florida Friendly Landscaping™ Guide to Plant Selection and Landscape Design" or other regionally appropriate plant material guide approved by the City. Landscaping may not include invasive species listed by the Florida Exotic Pest Plan Council. Landscaping in mixed-use and neighborhood zones shall include shade trees planted as street trees. PUD concept plans may include incentives, such as reduced tree mitigation, for shade trees planted as street trees outside of mixed use and neighborhood zones.

Comment: Promote Florida-Friendly Landscaping. Since the City already has adopted the Florida-Friendly fertilizer ordinance, the City can obtain a 3% TN stormwater pollutant load reduction on all TMDLs by revising their landscape code to make it consistent with the Florida-Friendly Landscaping Model Ordinance.

Policy 13.2.22: Complete Streets

The transportation system shall be designed with complete streets in accordance with Objective 1.2 [M] and associated policies in the Mobility Element. A PUD Concept Plan shall provide in mixed-use centers for complete streets that include safe and convenient pedestrian facilities reasonably free from hazards and adequately separated from streets that carry high volumes of vehicular traffic and create a reasonable and direct route between destinations. Sidewalks shall be provided on both sides of local streets in mixed-use zones. Sidewalks shall be provided on at least one side of local streets in zones that allow only residential development.

Comment: Complete streets also can include LID stormwater BMPs as set forth on the Smart Growth America web site and the National Association of City Transportation Officials web site. This represents a lost opportunity with the current policy and program.

Policy 13.2.24: Parking in Mixed-Use Centers.

In mixed-use centers, vehicular parking shall be located on the street, in parking structures, or off-street at the street level. Off-street parking shall be provided in the rear of buildings where feasible based on engineering design standards and the protection of environmental features, or on the side of buildings and shall be limited in size and scale through such measures as shared parking, parking credits, and maximum parking limits. Pervious pavements are encouraged for parking stalls along with recessed landscaped islands that serve as rain gardens. PUD Concept Plans may include incentives, such as reduced parking or setback requirements, for the use of building-mounted solar systems on parking structures.

Comment: Encourage LID parking lots.

Policy 13.2.33: Stormwater Management.

Prior to approval of the first PUD Concept Plan, a Stormwater Facilities Master Plan (SFMP) shall be prepared for the entirety of the Welaunee Arch. The Stormwater Facilities Master Plan must be reviewed and approved by the City before PUD Concept Plans can be approved. For areas not included in a PUD, the stormwater plan may be conceptual and generalized based upon the projected development allowed the projected development allowed by this master plan accounting for non-developable areas.

The SFMP shall take into consideration stormwater flows from full build out conditions from any upstream, off-site property. However, nothing herein shall relieve the upstream, off-site properties from complying with applicable environmental ordinances or standards. The SFMP shall, at a minimum, identify regional impacts to flood extents and stormwater conveyance; establish infrastructure requirements necessary to manage stormwater in compliance with local, state, and federal regulations; document the phasing, implementation, and easement reservations necessary to serve projected full build out; and facilitate environmental and stormwater permitting. To accomplish these goals, the SFMP shall provide analysis and design of the primary stormwater system based on detailed hydrologic and hydraulic modeling of existing and post-development conditions. The analysis shall incorporate existing land uses, soils and topographic data, and the conceptual land use plan (Figures 13-5 through 13-7). The design shall

provide general parameters associated with the primary stormwater management facilities, drainage easements and conservation easements necessary to serve the development under projected full build-out conditions. Flood extents delineated by the SFMP shall identify the 100-year flood exclusion area under the full build-out condition. No habitable structures shall be constructed within the post-development, full build-out 100-year floodplains or 100- year flood exclusion areas. The SFMP shall incorporate low-impact design principles and best management practices to encourage disconnection of impervious surfaces and increase the removal of nutrients from stormwater discharges. The SFMP shall also evaluate the existing nutrient pollutant loading to Class III surface water resources and ensure net improvement in the post-development condition. The SFMP scope of work must be approved by the City prior to development of the SFMP.

The Stormwater Facilities Master Plan shall identify the feasibility and location of regional stormwater facilities and how they should be designed and constructed as amenities within parks or publicly accessible areas. Stormwater facilities shall be located outside wetlands and floodplains. Stormwater facilities may be located in Open Space that is not wetland or floodplain subject to design standards in a PUD Concept Plan and consistent with protection of conservation and preservation lands required by the comprehensive plan and the Environmental Management Ordinance.

Comment: Excellent policy. Simply added LID to further encourage its use.

8.3.2 Chapter II. Mobility Element

Policy 1.1.10:

MMTD Residential Density Bonus. In order to increase redevelopment and infill development, residential densities within the MMTD may be increased up to 35% above the maximum allowed in the Residential Densities Range Table. This bonus shall not apply to lands designated Residential Preservation. Further bonuses may be applied to the Downtown. Eligibility criteria for these bonuses will be established within the land development regulations and shall include design standards facilitating pedestrian oriented site and building design with enhanced pedestrian access and amenities, urban scale development, innovative parking strategies, integrated mix of land uses, and other urban design features including low impact development principles.

Comment: Encourage and incentivize LID principles.

Objective 1.2: Complete Streets

The transportation system shall be designed and operated to provide safe, convenient and context-sensitive access for pedestrians, bicyclists, motorists, and public transportation users of all ages and abilities

Comment: Complete streets also can include LID stormwater BMPs as set forth on the Smart Growth America web site and the National Association of City Transportation Officials web site. This represents a lost opportunity with the current policy and program.

Goal 3: Aviation

Provide for adequate capacity and safe, appropriate airport facilities to meet the demand for Commercial Service, cargo, military, and General Aviation services and to enhance aviation and airport development opportunities, with sensitivity to protecting existing residential and natural resources adjacent to the airport.

Policy 3.3.3: [M] (EFF. 12/15/11)

Aviation and related facilities development and expansion shall be consistent with the conservation element and the Stormwater at Airports BMP Manual.

Comment: Ensure compliance with Section 62-330.449, F.A.C.

Policy 1.3.4*:*

Design, construct, and maintain transportation facilities to prevent flooding, minimize pollution, and maintain natural stormwater quantity, timing, rate, and direction of flow characteristics consistent with the adopted Stormwater Level of Service Standard.

Policy 1.3.6:

Require tree plantings, where practical, for both new and old roads to increase screening, beauty, runoff control and reduction of summer heat. Existing trees shall be protected during transportation system development and maintenance.

Policy 1.3.7:

Aesthetically enhance and provide added environmental protection to existing and new transportation corridors by the following methods which include but are not limited to:

a) Incorporating for new, or increasing for existing corridors, the number of green spaces/open spaces and pedestrian oriented areas.

b) Recognizing plantations as a significant part of the natural landscape when roads are being designed in areas of the County where they are present.

c) Encouraging the use of native vegetation and natural systems such as swales to control runoff.

d) Maintaining natural ground cover, canopy and understory where new roads are built.

e) Design public infrastructure improvements to minimize development impacts to protect designated canopy roads consistent with the Conservation Element.

f) Applying access management strategies that enhance the character of transportation corridors and gateways to the community by promoting shared access and consolidated signage and preserving green space for landscaping.

Comment: The three policies above are excellent and recognize the value of "Interceptor Trees", a LID BMP, in reducing stormwater volume and pollutant loading.

Policy 1.6.2

Acquire and maintain sufficient right-of-way when building new roads or widening old facilities in order to protect waterbodies, wetlands, and flood plains. Plan corridor alignments to avoid environmentally sensitive areas and where this is not possible, acquire wide roadside buffers and prohibit driveways by purchase of access rights, as necessary, to prevent development from occurring within the environmentally sensitive area, as a result of the roadway availability.

Comment: Another excellent policy based on LID principles.

8.3.3 Chapter III. Utilities Element

Objective 1.1: Potable Water Protection

By 1993, have regulations in place that protect potable water supplies from contamination as defined by DER Rule 62~~17-~~550, F.A.C.

Comment: Update rule reference.

Policy 1.3.3: PW

Incentives to encourage drought resistant Florida-Friendly Landscaping to minimize irrigation and fertilization ~~xeriscaping (low water use landscape design)~~ will be incorporated into the landscaping code.

Comment: To make consistent with Section 373.185, F.S.

Stormwater Management

Policy 1.2.2:

All permitted stormwater facilities shall be inspected periodically to ensure compliance with code.

Comment: The City is commended for developing and implementing an Operating Permit System that ensures stormwater systems are operated and maintained properly.

Policy 1.5.2:

The stormwater treatment performance standards ~~design~~ and water quality standards set forth in Florida Administrative Code Chapters 62-40.432 and 62-302 ~~17-3 and 17-25~~, as the same may be amended from time to time, are hereby adopted by reference as the level of service for stormwater quality. Local government may set higher minimum levels of treatment in watersheds where investigation and analysis indicate more stringent levels of service are required.

Comment: Replace design standards with performance standards and correct rule references.

Policy 1.5.4:

Water quality impacts from stormwater runoff associated with sites that were developed prior to the adoption of current stormwater treatment regulations will be addressed through two approaches. Land development regulations require water quality retrofit of sites that undergo ~~major~~ redevelopment. To address water quality impacted from older developed areas not undergoing ~~major~~ redevelopment, local government will develop and fund a water quality enhancement program. This water quality enhancement program will be developed with due consideration of State and Federal regulatory requirements, technical feasibility and community affordability. The water quality enhancement program will be funded through revenue generated by the Stormwater Fee at the funding level approved by the City Commission.

Comment: To make consistent with LDC Site Plan Review.

8.3.4 Chapter IV. Conservation Element

Policy 1.3.2:

Potential development within areas of the conservation overlay district shall exhibit best environmental management practices, such as low impact development principles and BMPs, with the emphasis on designing with nature. Assessed impact upon natural resource determines density and/or intensity within a prescribed range within which the parcel is located. Planned development is required for approval. Strict performance requirements will be applied. The major criterion for approval shall be the continued functioning, with minimum disturbances, of the ecosystem, which the development is impacting. Conservation area development criteria are as follows:

g) **Areas exhibiting active karst features (sinkholes)** No untreated stormwater will be allowed to enter active karst features. Stormwater discharged to active karst features must meet the following criteria:

(1) Runoff must be treated to comply with the requirements in Chapter 62-330, F.A.C, and the minimum levels of stormwater treatment set forth in Section 62-40.432 ~~Sec. 17-25.700(2)~~ F.A.C.;

Comment: Update references to current stormwater treatment requirements.

Objective 2.1: Stormwater Management

Policy 2.1.1:

By 1992, …Conservation Plan. As an interim measure, the stormwater treatment performance standards ~~design~~ and water quality standards set forth in Florida Administrative Code Chapters 62-40.432 and 62-302 ~~17-3 and 17-~~ must be met as the required LOS for stormwater quality.

Comment: Update terminology and rule reference.

Policy 2.1.4:

By 1992, local government shall develop standards for stormwater runoff from impervious areas and policies for meeting those standards. Incentives will be developed for the use of alternatives

to paving, for using pervious pavements, for limiting parking areas to code minimums and other alternatives that improve stormwater quality.

Policy 2.1.5:

Require parking areas in excess of minimum code requirements to be of pervious material unless determined by local government that pervious material would be more damaging to the environment.

Policy 2.1.6*:*

By 1991, local government shall review existing code requirements for parking and set minimum and maximum standards that are more oriented toward reducing impervious surface.

Comment: The above three excellent policies are based on LID principles.

Policy 4.2.5:

By 2010, local government shall adopt in the Land Development Regulations a mapped Primary Spring Protection Zone (PSPZ) for Wakulla Springs based on the Leon County Aquifer Vulnerability Assessment (LAVA). Land development regulations shall be adopted to establish additional requirements and regulations within the PSPZ to minimize the adverse impacts of development on groundwater recharge quality and quantity. At a minimum, local government shall address the item below:

- New development and redevelopment in the PSPZ shall use a Low Impact Development approach, in addition to conventional water quality treatment infrastructure required outside the PSPZ, to minimize adverse impacts of development on water quality and Wakulla Springs. Land development regulations shall specify the mechanism for implementing the Low Impact Development planning and design approach.

Comment: Excellent policy requiring LID. However, this has not been implemented in the LDC.

8.3.5 Chapter V. Parks and Recreation Element

Policy 1.1.4:

In the acquisition and development of future park facilities, priority shall be given to the preservation of natural vegetation and land features, consistent with the functional purpose of the individual park. As a minimum, a system-wide average of 50% of the natural features will remain undeveloped except for inclusion of passive recreational facilities, such as trail systems, ancillary parking, and picnicking facilities. This system-wide policy is based on the recognition that some types of facilities (such as golf courses and ball fields), due to their design requirements and functions, will require greater disturbance of natural features than would other types of park facilities. All golf courses shall be designed and operated consistent with the Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses.

This standard shall be based on all lands included in the level of service system provided in Policy 1.1.1 [R] above, not on the land holdings of an individual government.

Comment: Add current Golf Course BMP Manual to requirements.

8.3.6 Chapter VI. Housing Element

No specific comments.

8.3.7 Chapter VII. Intergovernmental Coordination Element

No specific comments.

8.3.8 Chapter VIII. Capital Improvements Element

Policy 1.1.3: Levels Of Service Required For Infrastructure, Facilities, Utilities

The following standards are hereby established as the minimum levels of service for various infrastructure, facilities, utilities and services required to support new development within the City of Tallahassee and Leon County

3. Stormwater

a. Tallahassee and Leon County (Category A)

The stormwater treatment performance standards ~~design~~ and water quality standards set forth in Florida Administrative Code Chapters 62-40.432 and 62-302 ~~17-3 and 17-25~~, as the same may be amended from time to time, are hereby adopted by reference as the level of service for stormwater quality. Local government may set higher minimum levels of treatment in watersheds where investigation and analysis indicate more stringent levels of service are required.

Comment: Replace design standards with performance standards and update rule references.

8.3.9 Chapter IX. Economic Development Element

No specific comments.

8.3.10 Chapter X. Public School Facilities

No specific comments.

8.3.11 Glossary

We offer the following revised definitions to make them more up-to-date and additional definitions for consideration.

BEST MANAGEMENT PRACTICES (BMPs)

Control techniques used for a given set of conditions to provide stormwater management and treatment in the most cost-effective manner. Categories of BMPs include structural BMPs, non-structural BMPs or source controls, and LID BMPs. The local government reserves the right to add to or alter BMPs in specific instances as part of development agreements or development orders.

~~Those practices and principles designed to reduce and manage non- point source pollution and in some cases, protect wildlife and habitat. These principles and practices are generally outlined in the latest updated version of various BMP manuals including "Silviculture Best Management Practices," "Best Management Practices," "A Landowners Handbook for Controlling Erosion for~~

~~Forestry Operations," "Management Guidelines for Forested Wetlands," "DER: Florida Development Manual, A Guide to Sound Land and Water Management," and other publications on best management practices that are accepted by the industries and regulatory bodies.~~

FLORIDA-FRIENDLY LANDSCAPING: Quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The 9 principles of such landscaping include planting the right plant in the right place, efficient watering, appropriate fertilization, mulching, attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

LOW IMPACT DEVELOPMENT (LID): Low Impact Development (LID) is an alternative site design strategy that uses natural and engineered infiltration and storage techniques to manage stormwater on-site where it is generated and reduce runoff volumes and pollutant loads.

NET IMPROVEMENT: The required level of treatment for stormwater management systems serving new development or redevelopment within the watershed of a water body that is verified as impaired by the Florida Department of Environmental Protection or for which a TMDL, BMAP, or alternative restoration plan has been adopted or accepted by the Florida Department of Environmental Protection. Defined as a ten percent load reduction of total phosphorus and total nitrogen from the existing pre-development or redevelopment condition to ensure that no additional stormwater pollutant loading is discharged into water bodies that are not meeting water quality standards.

8.4 Code of Ordinances

This section of the report contains the results of the review of the City of Tallahassee Code of Ordinances. The purpose of the review is to identify language within the Code of Ordinances that can be revised to improve the effectiveness of the City's MS4 Stormwater Management Program. The review identifies potential revisions of the current language that will further reduce the stormwater impacts of new development and areas of significant redevelopment. In particular, focus on changes to the Code of Ordinances that will promote low impact development, also termed green infrastructure: reductions in impervious surfaces, the use of swales or other retention BMPs, the incorporation of low impact development principles, reduction in flow and volume of stormwater, increase in natural hydrology, and adherence to the principles of the UF/IFAS Florida Yards and Neighborhoods (FYN) program in new landscaping.

All chapters of the City of Tallahassee Code of Ordinances, as listed below, were reviewed with respect to promoting better stormwater management and LID BMPS. However, comments and recommendations are not made for all chapters.

Chapter 1 - General Provisions

Chapter 2 – Administration

Chapter 3 – Alcoholic Beverages

Chapter 4 – Animals

Chapter 5 – Businesses

Chapter 6 – Community Development

Chapter 7 – Elections

Chapter 8 – Emergency Services

Chapter 9 – Environment

Chapter 10 – Fire Prevention and Protection

Chapter 11 – Human Rights

Chapter 12 – Offenses and Miscellaneous Provisions

Chapter 13 – Parks and Recreation

Chapter 14 – Pension and Retirement

Chapter 15 – Social Services

Chapter 16 – Special Assessments

Chapter 17 – Streets, Sidewalks, and Other Public Places

Chapter 18 – Taxation

Chapter 19 – Telecommunications

Chapter 20 – Traffic and Vehicles

Chapter 21 – Utilities

Chapter 22 – Vehicles for Hire

Note: Where specific language is being recommended for revisions, word additions are shown in red font and suggested deletions are shown in strike through font (i.e., stormwater management ~~drainage~~)

8.4.1 Chapter 4. Animals

Comment: Section 4-11 is the local "pooper scooper" law that requires animal owners to be responsible for retrieving and disposing of, in a sanitary manner, all excrement from any animal under the person's temporary or permanent custody or control.

This is supplemented by Chapter 9, Article III, Division 4 entitled Removal and Disposal of Animal Fecal Matter that applies to public open space and recreation areas.

8.4.2 Chapter 9. Environment

Article V. Fertilizer Use

Comment: This section is the City's Florida-Friendly fertilizer code required by Section 403.9337 F.S. The ordinance is consistent with the state model ordinance. To obtain a 3% TN credit on all DEP TMDLs and BMAPs, the City needs to modify its Landscape Regulations to be consistent with the Florida-Friendly Landscaping Model Ordinance.

8.4.3 Chapter 17. Streets, Sidewalks, and other Public Places

Article III. Tallahassee Regional Airport

Comment: Not sure that it fits here very well but not sure where this comment may be best. Somewhere in the stormwater program's legal framework the City should include a requirement that the airport is operated in compliance with the Florida Airports Stormwater Best Management Practices Manual. The Manual includes BMPs for stormwater management and treatment along with source control BMPs aircraft fuel sump control, turf management, sweeping, and system maintenance. The Manual is available on-line at: https://www.florida-aviation-database.com/dotsite/pdfs/Best_Management_Practices_Manual.pdf.

Article IV. Public Rights-Of-Way Management

Comment: Much of this section regulates activities within the City's rights-of-way that can include land and vegetation clearing. Are these activities required to have an erosion and sediment control plan? If they disturb one or more acre of land these activities are required to obtain the NPDES Construction Generic Permit and implement the required Stormwater Pollution Prevention Plan.

8.4.4 Chapter 21. Utilities

Article XII. Stormwater Collection and Disposal

Comment: Division 3, Municipal Separate Storm Sewer Discharges, serves as the City's MS4 illicit discharge ordinance as required by its NPDES MS4 permit.

8.5 Land Development Code

This section of the Report contains the results of the review of the City of Tallahassee Land Development Code. The purpose of the review is to identify requirements that can be revised to improve the effectiveness of the City's MS4 Stormwater Management Program. The review

identifies potential revisions of the current language that will further reduce the stormwater impacts of new development and areas of significant redevelopment. In particular, focus on changes to the Land Development Code that will promote low impact development, also termed green infrastructure: reductions in impervious surfaces, the use of swales or other retention BMPs, the incorporation of low impact development principles, reduction in flow and volume of stormwater, increase in natural hydrology, and adherence to the principles of the UF/IFAS Florida Yards and Neighborhoods (FYN) program in new landscaping.

Land development codes are the primary method of implementing the goals, objectives and policies of this Comprehensive Plan. The land development code of Tallahassee includes requirements for zoning, site planning, concurrency, signage, stormwater management~~, drainage~~, historic preservation, subdivision, landscaping and environmental management. These are regularly being reviewed and changed and adjusted to meet local, regional and state standards.

The Land Development Code consists of the following Chapters, all of which were reviewed to identify requirements related to improving stormwater management and the use of LID BMPs:

Chapter 1 – General Provisions

Chapter 2 – Administration

Chapter 3 – Buildings and Building Regulations

Chapter 4 – Concurrency Management

Chapter 5 – Environmental Management

Chapter 6 – Flood Damage Prevention

Chapter 7 – Sign Code

Chapter 8 – Streets and Sidewalks

Chapter 9 – Subdivisions and Site Plans

Chapter 10 – Zoning

Note: Where specific language is being recommended for revisions, word additions are shown in red font and suggested deletions are shown in strike through font (i.e., stormwater management ~~drainage~~).

8.5.1 Chapter 1. General Provisions

Section 1-2. - Definitions and rules of construction.
Comment: We offer the following revisions or additions to update the definitions or reference materials and make them more current with stormwater management state-of-the-art.

A. Proposed Additional Definitions

The following terms are recommended to be added to the definitions to enhance stormwater management and treatment:

Alternative Restoration Plan – The term "Alternative Restoration Plan" means a water quality restoration plan as defined by the Florida Department of Environmental Protection.

Basin Management Action Plan (BMAP) – The term "Basin Management Action Plan" (BMAP) means a five-year plan of actions and projects to reduce pollutant loading discharged to impaired water bodies with an adopted TMDL by FDEP.

Florida-Friendly Landscaping (FFL) – The term "Florida-Friendly Landscaping" (FFL) means quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The FFL principles include planting the right plant in the right place, efficient watering, appropriate fertilization, mulching, attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection. Additional components include landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Impaired Water Body – The term "Impaired Water Body" means a water body that has been verified as impaired by the Florida Department of Environmental Protection.

Low Impact Development (LID) – Low Impact Development (LID) is an alternative site design strategy that uses natural and engineered infiltration and storage techniques to manage stormwater on-site where it is generated and reduce runoff volumes and pollutant loadings.

Total Maximum Daily Load (TMDL) – The term "Total Maximum Daily Load (TMDL)" means a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of load reduction need for each the pollutant's source. TMDLs are calculated by the Florida Department of Environmental Protection and expressed in rule within 62-304, F.A.C.

B. Revisions to Existing Definitions

To update terminology, increase clarity, provide consistency with statewide definitions, and enhance stormwater treatment, the following definitions are recommended to be revised as shown.

Best management practices (BMP). The term "best management practices (BMP)" means control techniques used for a given set of conditions to provide stormwater flood control and treatment in the most cost-effective manner. Categories of BMPs include structural BMPs, non-structural BMPs or source controls, and Low Impact Development (LID) BMPs. ~~those practices and principles designed to reduce and manage nonpoint sources of pollution and in some cases, protect wildlife and habitat. These principles and practices are~~ BMPs generally are outlined in

the latest updated version of various best management practices manuals including the 2008 Silviculture Best Management Practices Manual (FDACS), the FDEP/NWFWMD Environmental Resource Permitting Applicant Handbooks, the Florida Stormwater, Erosion and Sedimentation Control Inspectors Manual, FDEP (latest edition) ~~Best Management Practices, A Landowner's Handbook for Controlling Erosion for Forestry Operations, Management Practices for Forested Wetlands, DER: Florida Development Manual, A Guide to Sound Land and Water Management,~~ and other publications on best management practices that are accepted by the industries and regulatory bodies.

Utility. The term "utility" means a commodity or service which is of public consequence and need, including but not limited to electricity, natural gas, sanitary sewers, water, stormwater management ~~drainage~~, telephone, television and transportation services.

Wet detention. The term "wet detention" means a stormwater management system with a permanent water pool that detains stormwater for an extended period of time to provide flood control and stormwater treatment. The ~~water quality treatment~~ system includes ~~uses that utilizes~~ water-tolerant vegetation and ~~which~~ removes pollutants through settling, absorption by soils, and nutrient uptake by vegetation. ~~and in which a design water pool is normally maintained which has a capacity to provide extended detention for the required stormwater treatment volume~~.

8.5.2 Chapter 3. Buildings and Building Regulations

Article II. Administration and Enforcement

Comment: Experience in stormwater programs around the country have shown that Stop Work Orders are the most effective compliance tool for ensuring stormwater systems are built in accordance with requirements. However, authority for Stop Work Orders is found in Chapter 5, Environmental Management, of the LDC.

Article VIII. Swimming Pools

Section 3-434. Swimming Pool Maintenance

(a) All swimming pools and their associated recirculating, filtration and disinfecting appurtenances shall be maintained in proper operating condition. Proper operating condition includes properly maintaining the pool so as not to create a safety hazard or harbor insect infestation. Water shall not be allowed to stagnate or to become polluted. All pools shall be free from unsightly appearance. All swimming pools shall be maintained to ensure the disinfection of all pool water by containing one part per million chlorine or 1.5 parts per million bromine. Nothing in this section shall prohibit the use of other disinfecting means as long as acceptable documentation is provided showing equivalent effectiveness. If disinfection is not maintained, then the owner of the real property upon which the pool is located shall be notified to either:

(1) Disinfect the swimming pool water pursuant to the minimum standard required in this section or drain the swimming pool.

(2) Drain and maintain the swimming pool, so that stagnant water does not accumulate.

(3) It shall be unlawful for the owner of any swimming or wading pool to drain any water into a stormwater management system unless the water has been dechlorinated with no more than 0.01 mg/L of free chlorine residual.

Comment: Requirement of the City's MS4 permit requirements for illicit discharges.

8.5.3 Chapter 5. Environmental Management

Article I.

Section 5-11. Objectives

This chapter is intended to protect, maintain, and enhance the immediate and long-term health, safety, and general welfare of the residents of the city. The following objectives support this purpose by encouraging productive and enjoyable harmony between humanity and nature. The objectives are listed according to their primary purpose, but many objectives also relate to and support other purposes of the chapter:

Landscaping:

(28) To ensure high quality Florida-Friendly Landscapes that minimize the need for irrigation or fertilization.

Comment: Promote and require Florida-Friendly Landscaping design and plants.

Section 5-12. Definitions

Comment: Please see recommended additional definitions and recommended revisions to current definitions in Chapter 1 comments above. Also applicable here. However, the broader BMP definition in this chapter may be acceptable given how the term is used in this Chapter.

First flush runoff means an initial amount of stormwater runoff containing the majority of the pollutants from an area.

Comment: We now know that first flush only applies on very small, highly impervious sites. Given that the term is not used anywhere else in Chapter 5, we recommend deleting the definition.

Article III. Section 5-55. Environmental impact analysis.

(6) Supporting information can include drainage calculations, stormwater pollutant loading calculations, soil borings, geotechnical information, retaining wall designs, photographs, other environmental narratives, wetland hydrocycle information, habitat management plans for listed species, vegetation management plans, canopy road tree protection zone impact analysis and mitigation plan, etc.

(11) The director may require additional technical information to demonstrate that the proposed development meets the development standards set forth in article IV of this chapter. Examples of supporting information include, but shall not be limited to, conceptual stormwater systems designs, drainage calculations, stormwater pollutant loading

calculations, soil borings, geotechnical information, retaining wall designs, photographs, management plans, etc.

Comment: Revisions recommended to quantify pre-development and post-development stormwater pollutant loadings and to ensure stormwater systems are meeting the minimum level of treatment, especially those in watersheds of impaired water bodies. Also, will provide stormwater pollutant load information needed for the City's MS4 permit Annual Report.

Section 5-56. Environmental management permit.

Comment: The City is commended for having its own environmental management permit and review process. This ensures that projects meet the City's more stringent stormwater requirements and ensures that projects permitted with the DEP 10/2 General Permit are reviewed and approved.

(c) *Components of environmental management permit.* An environmental management permit application shall consist of the following components: stormwater, landscaping, and tree removal. Most applications for an environmental management permit will contain all three components. However, depending on the characteristics of each property and proposed development activity, some applications may only contain one or two components.

(1) *Stormwater management component.*

a. *Projects with no significant change in ~~surface~~ stormwater runoff characteristics or projects with an existing stormwater management facility.* Projects with no significant change in ~~*surface*~~ *stormwater* ~~runoff~~ characteristics, as certified by a registered professional engineer or projects that have an existing stormwater management facility to meet the stormwater management development standards set forth in section 5-86 of this chapter, shall provide adequate technical data and analysis to the director including the following:

Comment: Replace "stormwater" for "surface water" since Section 5-12 defines "surface waters" as water bodies.

b. *Projects with a proposed on-site stormwater management facility.* Projects that are proposing to construct an on-site stormwater management facility or modify an existing stormwater management facility to comply with the stormwater management development standards set forth in section 5-86 of this chapter shall provide adequate technical data and analysis to the director including the following:

3. Stormwater management design report and supporting computations providing:

A. A written summary design report providing a discussion of the conclusions determined from the hydrologic and flood routing computations, stage, storage, discharge, and complete storm event information indicating compliance with this chapter and other information in written, tabular and graphic form to convey the techniques and design criteria utilized to ensure compliance with the provisions of this chapter.

B. All runoff hydrograph and routing plots and computations, to show compliance with section 5-86, for both pre-development and post development conditions. Stormwater retention facilities shall be designed to contain the difference between the pre-development and post-development volume of runoff. It will also be necessary to compute the time required for the design volume to infiltrate the bottom and side areas of the retention pond. Required volume for detention shall be computed through a storage indication method to route stormwater peak flows through the facility in compliance with section 5-86.

F. Pre-development and post-development stormwater average annual pollutant loadings for Total Nitrogen and Total Phosphorus to demonstrate the level of stormwater treatment provided.

Comment: Change "filtrate" to "infiltrate" and add new requirement for pollutant loading calculations to meet TMDL, BMAP, and NPDES MS4 requirements.

(2) *Landscape component.* A landscape plan based on Florida-Friendly Landscaping principles and using Florida-Friendly plants shall be submitted upon application for an environmental management permit for any development activity requiring landscaping according to section 5-83 and section 5-85. The landscape plan shall be submitted to the director and shall include adequate technical data and analysis including the following:

Comment: Promote and require Florida-Friendly Landscaping.

Section 5-57. General permit.

(d) *Required information.* The applicant is responsible for submitting a general permit in the application forms prescribed by the director. The application shall contain the narratives and other information sufficient to evaluate the specific details of the routine procedures, authorized by the general permit. The information shall consider the environmental characteristics of the affected areas, the potential and predicted impacts of the proposed activity and the effectiveness and acceptability of those measures proposed by the applicant for reducing adverse impacts. In the event the applicant fails to submit a completed application or any required additional information within 90 calendar days of notification of insufficiency, the director of growth management shall consider the application to be withdrawn. The applicant shall provide, but shall not be limited to the following:

4) Details and descriptions regarding sediment and erosion control measures and best management practices ~~are~~ to be used to prevent potential environmental impacts and retain sediment on-site.

Comment: Add ERP and NPDES CGP erosion and sediment control performance standard.

(f) *NPDES Construction Generic Permit*. Any project that disturbs one or more acres of land shall apply for and receive coverage under FDEP's NPDES Construction Generic Permit (CGP) and shall implement the required Stormwater Pollution Prevention Plan.

Comment: Ensure CGP is obtained as required by FDEP rules and MS4 permit.

Section 5-58. Stormwater management facility operating permit.

(a) *Scope.* Subsequent to construction of a stormwater management ~~retention or detention~~ facility, no stormwater management facility shall be utilized until a stormwater management operating permit application meeting the requirements of this section as applicable, has been submitted, the required application fee has been paid, and such application has been approved by the director, except that the following facilities shall not be required to obtain an operating permit:

Comment: Broaden applicability to all stormwater facilities.

(f) *Applications for stormwater facility operating permits.*

(1) *Facilities constructed or modified subsequent to adoption of this chapter.* Operating permits are required prior to final inspection and post-construction certification as provided for in section 5-62. The applicant shall be the permittee specified in subsection (b) of this section. The following information shall be required in the operating permit application: In the event the applicant fails to submit a completed application or any required additional information within 90 calendar days of notification of insufficiency, the director of growth management shall consider the application to be withdrawn.

c. If the permit is to be issued to a stormwater management facility property owners' association, a copy of the articles of incorporation and pertinent bylaws, which have been approved by the director as meeting the requirements of Section 12.3.1 of ERP Applicant's Handbook Volume I ~~62-25.027, Florida Administrative Code~~, and other local government requirements if any, and which have been recorded in the Official Record Books of Leon County; a list of the names, addresses, and telephone numbers of all association members and officers; and a certificate of good standing for the association, issued by the Florida Secretary of State evidencing the formal establishment of the association.

(g) *Renewal of operating permits.* Operating permits shall be renewed every three years. The permittee shall apply to the director for a permit renewal at least three months, but not more than six months, prior to expiration of the permit. Late applications for operating permits renewal shall be subject to twice the normal fee. Renewal shall be granted by the director when each of the following conditions are met:

(1) Inspection by the director, or sampling at the facility, confirms that all components are in good working order, that the facility is free of debris or excessive sediment deposits and is well stabilized, and that the facility is meeting or exceeding the design performance criteria specified in the environmental management permit and this chapter. Facilities for which no Environmental Management Permit was issued to authorize construction shall meet the facility performance criteria specified in Chapter 62-330~~25~~, Florida Administrative Code.

Comment: Update legal references to FDEP rules.

Section 5-59. Engineering certification of submittals.

Prior to being submitted to the director for review, all documents classifiable as the product of professional engineering, as defined in Chapter 471, Florida Statutes, shall be signed and sealed by a Florida registered professional engineer or by some other person legally qualified to practice engineering under the exemptions established in Chapter 471, Florida Statutes. Such documents include short form application information, standard form application information, and any floodplain information required as part of the permit application.

Section 5-63. Post-construction inspection, certification, and warranty for stormwater management facilities.

Comment: The City's requirements under this section are among the clearest and most comprehensive of any community that I have reviewed.

Article IV. Development Standards

Section 5-81. Conservation and preservation area development standards.

(2) *Conservation areas (altered wetlands, altered floodplains, closed basins, high quality successional forest, active karst features, canopy roads and special development zones).*

a . *Altered wetlands.* Protection of topography and hydrocycle. Existing natural topography shall be maintained within wetland areas. No alterations shall be made within a wetland area to the natural fluctuation of water levels or flows unless such alterations are part of an approved Wetlands Stormwater Management ~~detention or retention~~ System designed in accordance with Section 10 of the NWFWMD Applicant's Handbook Volume II, or unless such alterations are necessary for an approved utility system. In either case, such alterations are limited to wetlands which are determined by the director to have been degraded to the extent that their ecological functions have been detrimentally altered and, as a condition of the use of such a wetland, the design of the overall wetland alteration shall result in the substantial re-establishment of the natural functioning of the undisturbed portion of the wetland ~~as described in the 1988 DER "Florida Development Manual Guide to Sound Land and Water Management," or its successor provision~~. Determination of whether a wetland is significantly degraded (altered) shall be made by the director based on the wetland's current level of beneficial functioning and the likelihood that functioning may become re-established through natural processes as opposed to man-made mitigation. Monitoring of mitigation areas is required. A mitigation plan and monitoring plan shall be submitted with the environmental impact analysis. Conservation easements are not required to be dedicated to the city for altered wetlands.

Comment: Update reference to design of Wetlands Stormwater Management Systems and delete reference to Florida Development Manual which is out of date and not available.

2. *Constructed water bodies.* Water bodies approved to be constructed within altered wetlands shall be designed to provide water quality and storage benefits which

approximate natural healthy water bodies. Minimum requirements to ensure these benefits include:

D. Approval by the NWFWMD Environmental Resource Permit issued ~~state department of environmental protection~~ in accordance with Chapters 373 and 403, Florida Statutes.~~, if subject to that agency's jurisdiction~~.

Comment: Environmental resource permit is now done by NWFWMD for such projects.

e. *Active karst features (sink holes).* All development activities shall comply with the requirements of subsection 5-86(i) and:

3. Discharge of stormwater runoff into any active sinkhole shall conform to the following: A. *Runoff treatment.* Runoff to be discharged directly into the sink shall be treated to comply with Section 62-550.310 and 62-550.320 ~~28.700(2)~~, Florida Administrative Code, prior to discharge

Section 5-82. Special development zones

(i) *Best management practices.* The following best management practices, at a minimum, shall be required in conjunction with all new development and redevelopment activities and shall be adhered to by all owners of property which is located within or next to any portion of the Lake Jackson, Lake Lafayette, Bradford Brook Chain-of-Lakes, Fred George, or Lake Iamonia basins, and which is now, or later comes, within the corporate limits of the city.

(5) Use of native, low-fertilization, and low-maintenance Florida-Friendly vegetation;

(7) A Conservation Plan from the U.S. Natural Resources Conservation Service ~~Soil conservation service~~ with approved conservation practices, including erosion and sediment control and water quality BMPs as set forth in BMP Manuals adopted by the Florida Department of Agriculture and Consumer Services ~~practices~~ for all agricultural operations.

Comment: Promote Florida-Friendly Landscaping and update agricultural BMP requirements to comply with Florida laws and rules.

Section 5-85. Landscaping and urban forest standards

(c) *Certification.* The landscape development plan shall be based on the principles of Florida-Friendly Landscaping and prepared and submitted by a person qualified to prepare such a plan in accordance with chapter 481 Part II, Florida Statutes. In accordance with section 5-64, a landscaping and urban forest compliance report shall be submitted by the permittee's landscape professional a minimum of seven days prior to requesting a final environmental inspection. Changes in the permitted landscape development plan shall require a permit amendment, prepared by the permittee's landscape professional in accordance with subsection 5-56(e).

Comment: Promote Florida-Friendly Landscaping. Since the City already has adopted the Florida-Friendly fertilizer code, it can receive a 3% TN load reduction on TMDLs and

BMAPs by revising its landscape code to be consistent with the Florida-Friendly Model Landscape Ordinance.

(k) *Landscape requirements for vehicular use areas.* It is the intent of this subsection to promote vehicular and pedestrian safety; to limit physical site access to established points of ingress and egress; to delineate and buffer the bounds of abutting vehicular use areas so that distractions of movement, noise and glare from one area do not adversely affect the activity in another area; to break up large expanses of pavement and to reduce the heat sink effect within the vehicular use areas of a site. The following requirements shall apply to all vehicular use areas and off-street parking facilities:

(7) *Landscape island requirements within vehicular use areas.* The following requirements shall apply:

i. Landscape islands may be recessed with curb cuts to be used as a rain garden or other stormwater management BMPs.

Comment: Promote LID BMPs in parking lots.

(m) *Standards for all landscape areas and established urban forest areas.* The following standards shall apply to all landscape areas and established urban forest areas, including the residential subdivision requirements and the vehicular landscape area requirements:

(1) All plants used as a part of any landscape plan shall be healthy, well proportioned, disease-free and pest-free, and hardy for the North Florida Region. Unless otherwise provided herein, only Florida No. 1 or better plant material as described in "Grades and Standards for Nursery Plants," Part I, 1998, and Part II, State of Florida, Department of Agriculture, Tallahassee, shall be credited toward the landscape area requirements of this chapter. All plants shall be Florida-Friendly plants or native plants.

(2) Landscape design shall be based on the principles of Florida-Friendly Landscaping. The use of plant material, site design techniques, and planting design techniques which enhance wildlife habitat benefits is strongly encouraged. The publication "Planting a Refuge For Wildlife," available from the Florida Game and Freshwater Fish Commission, may be used as a guide.

(3) Prohibited plants. Plants prohibited by the state Department of Agriculture and Consumer Services ~~environmental protection~~ shall not be used. A list of prohibited plants shall be furnished by the city, growth management department.

Comment: Promote Florida-Friendly Landscape design and plants and update reference to FDACS instead of FDEP since FDACS rules 5B-57 and 5B-64 list prohibited plant species.

(15) Irrigation. All required landscaped areas and buffer strips shall be provided with an automatic irrigation system. The irrigation methods to be used shall be indicated on the landscape plan. All irrigation lines shall be installed so as not to impact the critical protection zone of existing trees. Florida-Friendly, drought resistant landscape design and plants ~~Xeriscaping~~ shall be encouraged.

(16) Use of landscape areas or land use buffers. No accessory structures, garbage or trash collection points or receptacles, parking or any other functional use contrary to the intent and purpose of this section shall be permitted in a required buffer or landscape area. This does not prohibit the combining of compatible functions such as landscaping, stormwater BMPs, LID BMPs, ~~drainage facilities,~~ passive recreation areas and preservation areas into an effective and beneficial multiple use of the subject land resource.

Comment: Florida-Friendly Landscaping, not Xeriscape, is promoted by Section 373.185, F.S. and update terminology.

Section 5-86. Stormwater management design standards.

Discussion: The issue below is the use of BMP treatment volumes instead of minimum pollutant load reduction requirements. The language changes recommended below are based on the State's existing stormwater treatment performance standards as set in Section 62-40.432, F.A.C. They also are based on the performance standards adopted and implemented by Pinellas County and Alachua County, both of which have adopted stormwater treatment manuals in recent years to improve stormwater treatment and encourage LID principles and BMPs. Currently, FDEP is working on a new statewide stormwater treatment rule to increase the pollutant load reductions being achieved by stormwater systems, especially for projects that will discharge, directly or indirectly, into water bodies that are not meeting their applicable water quality standards. These include water bodies that are not meeting their applicable water quality standards: water bodies on the Verified List of Impaired Waters, water bodies with an adopted TMDL or BMAP, or water bodies with an approved Reasonable Assurance Plan. The "Net Improvement Performance Standard" applies to water bodies that are not meeting their water quality standards because of discharges of pollutants, such as nutrients, from stormwater discharges.

(c) Stormwater ~~Water quality~~ treatment standards.

(2) Minimum *Stormwater Level of Treatment* ~~water quality standard~~. The following average annual stormwater TN and TP load reductions shall be achieved by designing, constructing, operating and maintaining an approved stormwater management system ~~water quality treatment measures shall be used in the city~~. The drainage area for determining required treatment volumes shall include all areas draining to the facility (on-site and off-site).

a. Projects that discharge directly or indirectly to surface waters – Reduce the post-development annual average stormwater total nitrogen load and total phosphorus load by at least 80%.

b. Projects that directly discharge to Outstanding Florida Waters – Reduce the post-development annual average total nitrogen and total phosphorus load by at least 95%.

c. Projects within watersheds of Verified Impaired Water Bodies or Water Bodies with Adopted Nutrient Total Maximum Daily Loads (TMDLs) – Either meet the performance standard in a or b above or reduce the post-development average annual nitrogen and phosphorus load to at least 10 percent less than the pre-development average annual nitrogen and phosphorus load, whichever provides the highest amount of average annual nutrient load reduction (Net Improvement Performance Standard).

(d) Recovery of stormwater treatment volume:

1. Wet detention systems shall not discharge more than half of the treatment volume within the first 60 hours after a storm.

2.. Retention systems shall ensure the treatment volume is available within 72 hours after a storm.

3. Detention with filtration systems shall ensure the capacity for the treatment volume is available within 72 hours after a storm.

~~a. *Wet detention.* The wet detention treatment volumes shall be, at a minimum, the runoff from the first three inches of rainfall, or as option, for sites with drainage areas less than 100 acres, the first 1.5 inches of runoff. No more than half of the volume may be discharged in the first 60 hours.~~

~~b. *Off-line retention.* Off-line retention treatment volume shall be at least the first 0.75 inch of runoff. The treatment volume shall again be available within 72 hours following a storm event.~~

~~c. *On-line retention or detention with filtration.* For on-line retention, or detention with under-drain filtration, the treatment volume shall be at least the first 1.125 inches of runoff. Retention basins shall again provide the capacity for the required treatment volume of stormwater within 72 hours following the storm event. Detention basins with filtration systems shall again provide the capacity for the specified treatment volume of stormwater within 72 hours following a storm event.~~

~~d. *Special site constraints.* If site constraints require another method of water quality treatment, such other method may be approved by the director if it provides treatment of at least the first 1.125 inches of runoff.~~

Comment: The BMP treatment volumes stated above are not water quality standards. Stormwater systems are designed to achieve the minimum level of treatment above (the performance standard). This creates a rebuttable presumption that the stormwater discharge does not cause or contribute to violations of state water quality standards. The current language describes the treatment volume for different types of stormwater BMPs, not the actual minimum level of stormwater treatment. The revised language sets forth the minimum levels of stormwater treatment set forth in Section 62-40.432, F.A.C. The design of BMPs, including their required treatment volume, is site specific and BMP specific.

(4) *Rain Gardens. ~~Runoff buffers~~.* For sites that will contain less than 10,000 square feet or ten percent of impervious surface, whichever is less, rain gardens or other LID BMPs ~~runoff buffers~~ may be allowed. ~~Runoff buffers~~ These BMPs are alternatives to traditional stormwater treatment facilities. They shall utilize landscape areas or urban forest areas that provide retention as a means of treating runoff. The applicant shall demonstrate that no adverse impacts will result and that the purposes and standards of this section are met.

Comment: Where are the design, construction, and operational criteria for "runoff buffers?" These are not included in the current NWFWMD ERP Applicant's Handbook. Recommend revising to require rain gardens or other LID BMPs that can be integrated into landscaping or open space.

(e ~~d~~) Rate control standards.

(f ~~e~~) Volume control standards in regulated closed basins.

Comment: Update numbering because of the addition of (d) Recovery of stormwater treatment volume. Continues until end of this section.

(g ~~f~~) *Stormwater management facilities design standards.* All stormwater systems shall be designed using the latest edition of the NWFWMD ERP Applicant's Handbook Volume II or the Tallahassee Land Development Code, whichever is most stringent, ~~Florida Department of Environmental Protection's Florida Development Manual~~, or other methods as approved by the director, to prevent violations of state water quality standards.

(1) *Retention facilities.* An analysis shall be performed to confirm the stormwater retention facility retains the required volume of runoff by this section. Retention facilities in regulated closed basins shall be designed in accordance with the closed basin standards specified in subsection (f e) of this section. Retention facilities with no outlet or downstream conveyance that are not in regulated closed basins shall be designed in accordance with closed basin standards. It shall be demonstrated that the total required retention volume shall be available within 90 hours following a rainfall event. As an alternative, a continuous hydrologic simulation over an extended rainfall period selected by the director may be analyzed to demonstrate that retention requirements are met. Compliance with the above requirements can be demonstrated through one of the following three methodologies:

Comment: Update reference to current BMP design criteria. However, please realize that the current NWFWMD BMP design criteria will not achieve the minimum level of treatment. The Legislature has required FDEP to update the statewide stormwater treatment requirements so they will achieve the minimum levels of treatment and include LID BMPs. Until then, the City may want to refer to the Alachua County Stormwater Treatment Manual which is the most advanced in the state.

a. *Option 1.* On the basis of the soil infiltration rates listed below, demonstrate the total required retention volume is recovered within 90 hours. The soil texture class used for the above analysis shall be the more restrictive of either the proposed bottom of the retention

facility elevation or that of a deeper stratum of lower permeability. The USDA soil texture class shall be based on a particle-size distribution analysis of soil borings indicative of the retention pond area. Soil borings shall be conducted to a minimum depth of 20 feet below the proposed bottom of the retention facility and identify subsurface strata variations.

b. *Option 2.* On the basis of a subsurface geotechnical analysis of each proposed retention facility, demonstrate the total required retention volume is recovered within 90 hours. This alternative is virtually the same as option one, however infiltration rates are acquired through a geotechnical analysis. The determination of infiltration rates shall be based upon an infiltration analysis using "undisturbed" soil borings or a double-ring infiltrometer test (conducted per A.S.T.M.) at or below the bottom of the proposed retention facility. In either case, a soil boring shall be conducted to a minimum depth of 20 feet below the bottom of the proposed retention facility. A geotechnical report, prepared and certified by a licensed professional engineer qualified to do such a report, pursuant to Florida Statutes 471, shall address the following:

Comment: We assume that "total required retention volume" includes both the flood control and stormwater treatment volumes. State rules require the treatment volume to be recovered within 72 hours.

(2) *Filter systems.* Side bank or upflow filters shall be utilized provided their design flow is adequate to meet drawdown requirements. Filters shall use BAM (Biosorption Activated Media) to meet required levels of TN and TP removal. ~~Bottom filters or mounded filters may be approved if it can be demonstrated that there is absolutely no other alternative.~~

Comment: Update filter design and technology. It is well documented that side bank sand filters do not effectively reduce nutrient loadings, and may actually increase them However, side bank filters with BAM can work if designed hydraulically correct.

(3) *Side slopes.* The side slopes of stormwater management ~~detention and retention~~ facilities shall be sodded and the perimeter of all open-air stormwater management facilities with side slopes greater than 4:1 shall be landscaped pursuant to subsection (g ~~f~~)(8) of this section. If any part of a stormwater facility utilizes retaining walls or grades steeper than 4:1, that portion of the facility shall be surrounded by green, brown or black vinyl coated fencing at least four feet in height. If the retaining wall extends at least four feet above the ground level on the high side, no fence is required. A certified stability analysis shall be provided for all ponds with cut slopes greater than 2:1, fill slopes greater than 3:1.

(4) *Overflow systems.* Stormwater stormwater management ~~detention and retention~~ facilities shall include overflow design features as necessary to minimize the risk of any significant adverse impacts caused by overtopping during storms up to and including 100-year storm events. There shall be at least one foot of freeboard above the peak stage of the 100-year critical storm event and below the top of the pond.

Comment: Revision recommended to broaden applicability.

(9) *Stormwater management facility design requirements for landscape credit.* Stormwater management facilities can be counted towards the landscaping requirements in subsection 5-85(d) as follows:

a. *When the size of all lots, parcels or sites involved in the development total between zero and two acres.* The stormwater management facility can be counted toward the landscaping requirements, provided LID BMPs are used and they are ~~the facility is~~ designed in a manner that integrates them ~~it~~ into the landscape theme to the maximum extent feasible and provided the requirements in subsections (g ~~f~~)(10) and (11) of this section are met.

b. *When the size of all lots, parcels or sites involved in the development total over two acres.* The stormwater management facility can be counted toward landscaping requirements as follows:

1. *Wet detention systems ~~ponds~~.* A credit in the amount of 100 percent of the system's normal water level ~~pond~~ area, provided the system ~~pond~~ meets the requirements set forth in subsections (g ~~f~~)(10) and (11) of this section.

2. *Dry retention/detention systems ~~ponds~~.* A credit in the amount of 100 percent of the system's normal water level ~~pond~~ area for side slopes of 4:1 or flatter along at least 50 percent of the system's ~~pond~~ perimeter and a credit of 50 percent of the system's ~~pond~~ area for side slopes greater than 4:1, provided the system ~~pond~~ meets the minimum standards set forth in subsections (g ~~f~~)()(10) and (11) of this section.

(10) *General criteria for stormwater management facility design.*

a. The stormwater management facility shall be designed and constructed using predominantly non-angular, freeform, curvilinear contouring that functions to visually integrate the facility into the overall landscape design for the site to the greatest extent possible.

b. Planting specifications and species for stormwater management facility landscaping shall be suitable for individual facility ~~pond~~ characteristics of soil, slope, aspect, hydroperiod and microclimate and approved by the growth management biologist.

c. The pond area shall be the area encompassed by the pond's maximum contour line.

Comment: Clarification since ponds are surface waters and stormwater systems are not. Additionally, by calling stormwater systems "ponds" residents often think they should be meeting water quality standards.

(11) *Plant material requirements.*

a. *Wet detention facilities.*

1. *Facility ~~pond~~ perimeter.* Appropriate species of aquatic plants, as approved by the growth management biologist, shall be placed so as to provide a continuous planting along 80 percent of the perimeter defining the facility's ~~pond's~~ mean high water level within two years of planting.

2. *Facility ~~Pond~~ area.* Planting specifications and species for stormwater management facility landscaping shall be suitable for individual facility ~~pond~~ characteristics of soil, slope, aspect, hydroperiod and microclimate, and approved by the growth management biologist.

Planting specifications and species for stormwater management facility landscaping shall be suitable for individual BMP ~~pond~~ characteristics of soil, slope, aspect, hydroperiod and microclimate and approved by the growth management biologist.

Comment: Note that state ERP rules recommend concentrating the required littoral zone near the discharge instead of on the system's perimeter. This is because experience has shown homeowners will remove the vegetation to prevent snakes and other critters living there. Clarification since ponds are surface waters and stormwater systems are not. By calling stormwater systems "ponds" residents often think they should be meeting water quality standards.

(h) *Regional stormwater management facilities.*

(1) Use of regional stormwater facilities. When stormwater runoff is discharged into a regional storm water management facility the following criteria shall be met:

e. Water quality discharge requirements shall be provided by the regional facility, or by some other approved treatment facility into which discharge shall enter.

h. When a regional/multi-site stormwater facility ~~retention or detention~~ is required, pursuant to this subsection, the local government having primary jurisdiction over the site shall ensure that:

Comment: We commend the City for including the option of regional facilities and for actually constructing them. Above revision is to maintain consistency of terms.

i. All existing developed areas not in compliance with state and local water quality discharge requirements, including sites which might otherwise be in compliance as a result of exemptions in Chapter 62-25 or 62-330, Florida Administrative Code, relating to existing systems, discharges, and pollution loads shall be addressed through a government administered regional water quality retrofit program. The objective of the retrofit program is to provide stormwater quality treatment capacity to existing sites which were never previously provided with capacity. Retrofit program objectives may be addressed in multi-purpose stormwater facility projects which address other objectives such as flood attenuation or treatment capacity for future development.

Comment: We commend the City for recognizing the need to retrofit older development to reduce stormwater pollutant loadings. We assume this does not apply to redevelopment projects that are required to implement up-to-date stormwater management systems.

(2) A development may use an off-site facility in-lieu-of constructing a detention or retention facility provided:

a. Stormwater treatment ~~Water quality standards~~ for the stormwater discharge from the site as required in subsection (c) of this section are satisfied through provisions for actual treatment and not through any exemptions relating to modifications to existing systems or discharges which might otherwise be available under Chapter 62-330 ~~25~~ of the Florida Administrative Code.

b. If a regional stormwater management facility has been planned but does not yet exist, then interim facilities that attenuate to existing conditions shall be provided.

c. If the redevelopment discharge rate is to be in excess of the discharge rate prior to redevelopment, then an adequate off-site conveyance must be available or must be provided by the applicant.

Comment: Clarify stormwater treatment terminology and update rule reference.

(~~i~~) *Discharge to sinkholes.* The direct discharge of stormwater runoff into any active sinkhole shall conform to the following:

(1) *Runoff treatment.* Runoff to be discharged directly into the sink shall be treated to meet the net improvement standard as specified within 5-86 and in accordance with Section 62-550.310 and 62-550.320, F.A.C.

Comment: Update requirements for discharges to sinkholes.

(m) *Limited use of underground stormwater management facilities.*

(2) Minimum design standards for all underground stormwater management facilities. Once the director has made a determination that use of underground stormwater management facilities shall be authorized, compliance with the following design standards/requirements must be demonstrated in the environmental permit application:

b. Water quality treatment shall be provided using surface ponds and/or mechanical or chemical treatment methods designed in conformance with subsection 5-86(c) prior to discharge to underground storage attenuation cells; and

Comment: Does this apply to exfiltration systems and underground retention systems as set forth in the Alachua County Stormwater Treatment Manual? Why? These BMPs are being widely used around the state, especially in dense urban areas, without major issues.

Section 5-88. Sediment and erosion control standards.

NPDES Construction Generic Permit. All projects that disturb one or more acres of land shall apply for and receive coverage under FDEP's NPDES Construction Generic Permit. A copy of

the authorization shall be provided to the City. A Stormwater Pollution Prevention plan must be developed and implemented.

The sediment and erosion control plan. The sediment and erosion control plan is a document to be submitted as part of every environmental management permit application. It shall indicate the type and location of the best management practices to be implemented on the development site in order to minimize erosion and prevent sediment from leaving the site. Failure to properly execute the sediment and erosion control plan or any condition of the permit as it relates to sediment and erosion control shall result in immediate issuance of a "stop work" order that shall remain in effect until the site is stabilized and brought into compliance as determined by growth management staff. This plan shall contain all pertinent information for review and implementation, such as a narrative, map, site plan, construction details, and calculations. The plan shall ~~be~~ adhere to the following requirements:

(7) *Inspect and maintain control measures.* Prior to and during construction, the permittee shall implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment on-site and to prevent violations of state water quality standards. The permittee shall promptly correct any erosion or sediment accumulation that causes adverse impacts to the water resources. Failure to properly execute the sediment and erosion control plan or any condition of the permit as it relates to sediment and erosion control shall result in immediate issuance of a "stop work" order that shall remain in effect until the site is stabilized and brought into compliance as determined by growth management staff. Sediment accumulations in the system from construction activities shall be removed immediately to prevent loss of storage volume. All practices must be in accordance with the guidelines and specifications in Part IV, Chapter 11.0 of the NWFWMD Applicant's Handbook Volume I ~~6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988)~~, latest edition, and the Florida Stormwater~~,~~ Erosion, and Sedimentation Control Inspector's Manual, latest edition, both of which are hereby incorporated by reference, unless a project-specific erosion and sediment control plan is approved as part of the approved environmental permit, in which case the practices must be in accordance with the plan.

(9) *Site specific conditions may require additional best management practices.* During any phase of construction or operation, to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the environmental inspector may require the applicant to provide additional best management practices, or revise the sediment and erosion control plan as necessary, in accordance with the specifications in Part IV, Chapter 11.0 of the NWFWMD Applicant's Handbook Volume I, ~~Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management (Florida Department of Environmental Regulation 1988~~ and the Florida Stormwater~~,~~ Erosion, and Sedimentation Control Inspector's Manual, latest edition.

(10) *Projects discharging to wetlands.* For a project that will be discharging directly to a wetland, waterbody, or watercourse, an applicant must provide reasonable assurance that construction activities will not cause sedimentation and that filtration of runoff will

occur prior to discharge into these features. It is presumed that this standard will be met if, in addition to implementation of the plan, any one of the following criteria is met:

b. Construction of the following perimeter controls at all outfall points to the feature must be completed prior to the start of any construction activities:

4. Sediment basins shall be constructed for all development activities prior to any soil disturbance within the proposed area to be developed. The location of the sediment basins shall be selected such that they provide maximum storage benefit and maximum protection to the wetlands. Sediment basins shall be constructed in accordance with the Florida Stormwater, Erosion~~,~~ and Sediment~~ation~~ Control Inspector's Manual, latest edition; and

7. Dewatering of the sediment basin ~~pond~~ shall be provided by methods described in Dewatering Activities of Section IV, Sediment Containment Systems, of the Florida Erosion and Sediment Control Designer and Reviewer Manual, latest edition, or in Chapter 5 of the Florida Stormwater~~,~~ Erosion, and Sedimentation Control Inspector's Manual, latest edition. ~~means of a stone outlet sediment trap similar to the one shown on page 6-357 of the Florida Department of Environmental Protection Florida Development Manual~~. The outlet sediment trap shall be constructed of No. 57 stone or other media providing comparable filtration. Minimum sediment trap width shall be four feet, and it shall extend from the sediment basin bottom to the top elevation of the settling zone. The minimum length shall be hydraulically designed to pass the average flow, Q, through the settling zone depth. Darcy's equation shall be used to determine the hydraulic capacity of the stone outlet sediment trap.

8. Sediment and erosion controls for properties with severe grades. Properties containing severe grade areas shall install a "heavy duty silt barrier" for sediment and erosion control. The "heavy duty silt barrier" shall consist of a double row of Type IV silt fence (as referenced in the Florida Department of Transportation's "Roadway Traffic Design Standards" and the Florida Stormwater~~,~~ Erosion, and Sedimentation Control Inspector's Manual, latest edition. ~~Florida Department of Environmental Regulation's "The Florida Development Manual: A Guide to Sound Land and Water Management").~~ One row shall be placed at the toe of the slope. The other row shall be placed ten feet beyond the toe. The silt fence placed beyond the toe shall be a silt barrier that consists of a Type IV silt fence supported by "hogwire" fence. Wooden posts shall be six foot long and four inches in diameter to support the "hogwire" fence. A continuous row of erosion control devices shall face the toe of the slope. All silt fences and hogwire fences shall be trenched and extended six inches below grade. Wooden posts shall be installed eight feet on-center on the downhill side of the trench. The director may approve an alternative sediment and erosion control plan if it is demonstrated by the applicant that such alternative provides a higher level of protection.

Comment: Update legal references and terminology.

Section 5-89. - Additional standards for the Bradfordville Study Area.

Discussion: The Bradfordville Study Area requirements were required in the settlement of a lawsuit between CURG (Citizens United for Responsible Growth) and Leon County overgrowth in the Bradfordville area. The settlement required stormwater to be treated to the OFW performance standard (95% average annual load reduction). It did this by greatly increasing the required treatment volumes for various types of stormwater BMPs. However, as discussed in Section 5-86(c) above, specifying a treatment volume is not specifying a minimum level of treatment. We have provided revised language to achieve the desired level of stormwater treatment and to promote LID principles and BMPs. It is recognized that the current requirements are part of a court settlement. However, these requirements are now out-of-date as the field of stormwater treatment has advanced substantially over the past 20 years. Therefore, we recommend the City and the County work together to update these stormwater requirements so they achieve the original stormwater treatment objectives.

Section 10-4.382. - Stormwater treatment standards within the Bradfordville study area.

(a) Stormwater runoff shall be treated to one of the following standards below:

Comment: As discussed in Section 5-86(c) above, specifying a treatment volume is not specifying a minimum level of treatment. The performance standard for the Bradfordville Study Area was equivalent to OFW treatment, namely 95% average annual stormwater pollutant load reduction. Recent monitoring of dry detention systems confirms they do not reduce stormwater concentrations and their level of treatment is directly proportional to the percentage of the annual stormwater volume that infiltrates and does not discharge from the system. Since dry detention systems do not obtain very high levels of stormwater treatment, why is the required treatment volume less than that required for retention systems? Also, remember that wet detention treatment effectiveness is directly related to the detention time or residence time, not the volume of water detained. Using the currently accepted methods of calculating stormwater pollutant loads and BMP load reductions in BMPTRAINS, the current Bradfordville stormwater treatment standards achieve the stormwater pollutant load reductions found in Table 8-1.

Table 8-1. Stormwater Pollutant Load Reductions

BMP	Treatment Volume	Load Reduction	Load Reduction	Load Reduction	Load Reduction
		CN = 30 DCIA = 0-15%	CN = 30 DCIA = 100%	CN = 98 DCIA = 0-15%	CN = 98 DCIA = 100%
Retention on-line	4" * % imp = 1.6" for 40% = 3.2" for 80%	98.4% 99.6%	74.9% 91.3%	75% 91.3%	75% 91.3%
Retention off-line	2.5" * % imp = 1.0" for 40% = 2.0" for 80%	95.9% 98.6%	60% 81.2%	60.8% 81.2%	60% 81.2%

(c) For calculating the treatment volume required for pervious pavements and graveled areas, initially such surfaces shall be assumed to be 100 percent impervious, then deductions in the required treatment volume for such areas can be taken that is equivalent to:

(1) The porosity of the pavement material times the thickness of the paving material times a safety factor of five-tenths.

(2) If, and only if, the soils immediately underlying the pavement for a depth of 18 inches have a permeability of three inches per hour or greater, as demonstrated by on-site percolation tests, then a further deduction can be taken equivalent to the porosity of the soil strata times four inches times a safety factor of five-tenths.

The above deductions will be allowed provided that the applicant specifically commits, in his stormwater operating permit, to regularly sweep/vacuum the area covered with pervious pavement and to verify the pavement's percolation capacity when the operating permit is renewed.

Comment: Please note that DEP and the WMDs have approved pervious pavement design, construction, and operational requirements that address this issue. The pervious pavement BMP in BMPTRAINS calculates the volume of stormwater infiltrated using the pervious pavement percolation rate and the rate through the sub-base storage system.

(g) *Facility design standards.*

(2) Retention facilities ~~ponds/areas~~ shall have 4H:1V maximum side slopes on a sufficient length of the perimeter to allow adequate maintenance access to the bottom of the facility. If any of the side slopes are steeper than this, a security fence shall be placed completely around the perimeter of the facility and located exterior to the maintenance access ways. The fence shall not be required if the pond depth is less than 18 inches.

(3) Wet detention systems ~~ponds~~ shall have 6H:1V maximum side slopes to two feet below the normal water level, then a maximum side slope of 2H:1V to the bottom.

(8) *Stabilization of stormwater treatment facilities:* All berms and side slopes shall be stabilized with pinned sod. Retention facility ~~Pond~~ bottoms can be seeded and mulched. Restabilization by the contractor or owner shall be necessary until such time that the sod is fully rooted and otherwise well established.

Comment: Update terminology to remove the word "ponds".

(9) *Rate control* as required in subsection 10-4.302 can be provided within any of the above water quality treatment facilities provided that the water quality treatment as required within this section is fully satisfied prior to any overflow/discharge from the facility.

Comment: This is not correct. By definition, an off-line system does not include the flood control volume.

Section 10-4.384. Best management practices for conservation and preservation areas. Best management practices shall be used in conjunction with all new development and all redevelopment in areas within designated canopy road corridors or within 50 feet of any floodplain, floodway, wetland, waterbody, natural watercourse, high quality successional forest, native forest, active karst feature, habitat area of any endangered, threatened, or special concern species, or any other environmentally sensitive area as identified in the Tallahassee-Leon County Comprehensive Plan, Conservation Element. Notwithstanding anything to the contrary in the definition of best management practices set forth in section 10-1.101, the best management practices for conservation and preservation areas within the Bradfordville Study Area are set forth below and are in addition to any other best management practices required by any provision of this Code:

(4) Use of Florida-Friendly or native, low-fertilization, and low-maintenance vegetation.

(6) NRCS or FDACS ~~Soil conservation service~~ approved conservation practices, including erosion and sediment control and water quality practices for all agricultural operations.

Comment: Promote Florida-Friendly Landscaping, update SCS name to NRCS, and add FDACS adopted BMPs.

(b) *Landscape area credit availability.* As a design alternative, 100 percent credit can be given toward the 25 percent landscape area requirements of section 10-4.344 when stormwater retention facilities meet the minimum standards as follows:

(1) Impoundment water depth is no deeper than 24 inches.

(2) Sediment sumps are to be located at all points of concentrated inflows to the ~~facility pond~~.

(3) The facility ~~pond~~ area allowable for landscape credit shall be defined as the area encompassed by the facility's ~~pond's~~ contour line at the spillway elevation.

(4) Landscaping shall function to visually integrate the stormwater management system into the overall landscape design of the site.

(5) The pond is landscaped in accordance with the following standards:

a. *Planting specifications.* Florida-Friendly plant species selected for stormwater management facility landscaping shall be suitable for individual the ~~facility pond~~ characteristics of soil, slope, aspect and hydro period and micro climate.

b. *Plant material requirements.*

1. Stormwater management facilities are to be landscaped with Florida-Friendly or native species which are well suited to the use within the boundaries of a stormwater management facility, including fluctuating water levels, changes in hydro periods, and anthropogenic impact. Aquatic species which are listed as prohibited by the Florida Department of Environmental Protection cannot be used under any circumstances.

Comment: Update BMP terminology and promote Florida-Friendly plants.

(f) Plant material. No aquatic plants or plants which are classified as those requiring water on a continual basis for survival shall be permitted. Since dry retention facilities ~~ponds~~ typically possess significant fluctuation in hydro periods, with the potential for extended dry periods, plants must be chosen which are adaptable to either dry or wet conditions, but capable of surviving and growing in either extended periods of inundation or extended periods of drought as referenced in the "Environmental Design Guide," published by the City of Tallahassee, Growth Management Department, or its successor. Other species may be used in dry retention facilities ~~ponds~~ if there is scientific evidence of their adaptability. Creative design and spacing of trees, shrubs and ground covers is encouraged.

Comment: Update BMP terminology.

Section 10-4.387. - Topographic alterations.

All projects involving alteration of the contour, topography, use or vegetative cover of land, shall comply with the "Florida Development Manual — A Guide To Sound Land and Water Management" published by the Florida Department of Environmental Protection.

Comment: What is the purpose of this section? The Manual is grossly out of date and not even available on the web. As one of the primary authors not sure what part of the Manual was being cited since it did not really address topographic alterations, except as a general principle for minimizing erosion.

ARTICLE V. REDEVELOPMENT STANDARDS

Section 5-113. Type I redevelopment

Comment: This type of redevelopment can add an additional acre of impervious surface area. This is a significant volume of stormwater and potential stormwater pollutant loading. While Section 5-113 (b) exempts some activities from stormwater requirements,

those projects that add impervious surface area are subject to the standards in 5-86(c) and (e).

Section 5-114. - Type II redevelopment.

(a) Type II is redevelopment activity on a site that is one acre or larger that involves the addition of impervious surface area that is either greater than 25 percent of the existing impervious surface area or greater than one acre.

(b) When type II is proposed, that part of the development activity that is not on an existing impervious surface shall comply with all applicable requirements and provisions of this chapter. That part of the redevelopment activity that is on an existing impervious surface shall be considered type I redevelopment and section 5-113 shall apply to that portion of the project

Comment: Projects required to meet 5-86 stormwater standards.

Section 5-115. - City stormwater retrofit projects.

(a) Certain projects undertaken by the city's stormwater program capital projects unit will be classified as stormwater retrofit projects, and will not be subject to the requirements of this chapter, except as provided below.

(b) City stormwater retrofit projects shall have a primary and overriding purpose of improving or managing the stormwater system or natural drainage system and shall not have a primary purpose of facilitating some other non-exempt development such as a roadway or building. However, minor accessories to stormwater retrofit projects, including, but not limited to, sidewalks, curb, fencing, and access driveways, shall be allowed. Stormwater retrofit projects may include the replacement, repair, reconstruction, and modification of existing stormwater facilities and systems, and/or the construction of new stormwater management facilities and systems provided that such replacement, repair, reconstruction, modification, and/or construction:

(1) Does not increase the off-site rate of discharge in the stormwater facility or system beyond its current rate (on-site increases that do not cause adverse flooding are acceptable);

(2) Does not cause adverse flooding to on-site or off-site property;

(3) Does not increase pollutant loading beyond current levels; or

(4) Does not change the points of discharge in a manner that would adversely affect downstream surface waters.

ARTICLE VII. - VIOLATIONS AND ENFORCEMENT

Comment: This article is one of the clearest and most comprehensive that I have read in any local government LDC. It is easily understood and covers stormwater facility construction, operation, and maintenance. It includes Stop Work Order authority which has been found to be the most effective stormwater management enforcement tool.

8.5.4 Chapter 6. Flood Damage Protection

No specific comments.

8.5.5 Chapter 8. Streets and Sidewalks

No specific comments.

8.5.6 Chapter 9. Subdivisions and Site Plans

Section 9-111. Required improvements.

(b) *Curbs and gutters.* Curbs and gutters, swales, and/or open ditches in subdivisions created and approved pursuant to these regulations shall be installed in accordance with the requirements and specifications of the city and in coordination with the city public works department. Such facilities shall be dedicated to and be maintained by the city.

(d) *Stormwater Management* ~~*Drainage*~~. All required stormwater management ~~drainage and surface water drainage~~ systems in subdivisions created and approved pursuant to these regulations shall be installed in accordance with the EMO and as approved by the engineer in the event that such are to be publicly dedicated systems. Such facilities shall be maintained by the city through appropriate easements or other legal instruments acceptable to the city attorney.

(k) *Required dedications.* The commission shall require the dedication to the public of such reasonable parts of the lands to the public for roadway, stormwater management ~~drainage~~, conservation or utility purposes as shall be necessary for the public health, safety and welfare. Such dedications shall be clearly marked on the plat and each plat shall include a note indicating that such dedications are conveyed to the city in connection with land development approval.

Comment: Update terminology.

Section 9-112. Subdivision design standards.

(c) *General principles of subdivision design.*

(8) Lot drainage: Lots shall be laid out to provide positive drainage away from all buildings. Individual lot drainage shall be coordinated with the approved stormwater management system plan ~~general stream drainage pattern for the area~~. Drainage shall be designed to avoid unnecessary concentration of runoff ~~drainage water~~ from each lot to other lots or parcels.

Comment: Update terminology and correct typographical error.

ARTICLE III. SITE PLANS

Section 9-152. Site plan review process.

(4) A utility service plan showing:

a. Existing stormwater ~~drainage~~ and wastewater sewer lines;

b. The disposition and/or retention of sanitary waste and stormwater.

c. The source of potable water; and

d. The location and width of all utility easements and rights-of-way.

Comment: Update terminology.

8.5.7 Chapter 10. Zoning

Article VI. Off-Street Parking, Loading and Vehicular Interconnection Requirements

Section 10-336. Modification of parking and interconnection requirements.

The director may modify parking, loading, and interconnection requirements where necessary and shall consider the following factors: environmental protection, heritage conservation, aesthetics, tree protection, stormwater management ~~drainage~~ and physical limitations such as topographical changes and slopes. The director shall notify the applicant in writing of the decision of the parking standards committee.

Comment: Update terminology.

Section 10-359. Off-street parking space standards.

d) *Parking surfaces.* Except for single- and two-family dwellings and agricultural uses, every off-street parking area shall be surfaced with a material that provides a durable and dust-free surface, including pervious pavements, as approved by the land use administrator, upon consultation with appropriate representatives of the public works department. However, parking for seasonal uses and portions of off-street parking lots not used on a regular basis may be exempted from the paving requirements of this subsection. Determination of the granting of such exemptions shall be made by the director.

Comment: Promote pervious pavement for parking lots to reduce stormwater volume and pollutant loading.

8.6 City of Tallahassee Resiliency Plan

Vulnerability and Risk Assessment - Flooding

Comment: With regard to Flooding, was curious why the changes in rainfall intensity and volume accompanying climate change were not noted as a factor influencing flooding risks.

Goal 2: Hazard Mitigation and Climate Adaptations

Goal 2 Strategies:

Strategy 2.1. Enhance the protective features of the natural ecosystem.

Comment: Excellent list of Initial Actions that promote LID principles and BMPs including stormwater interception by trees.

Strategy 2.5. Future-proof our built environment by elevating risk considerations and sustainable design standards.

Comment: Glad to see that sustainable design standards are including. Low Impact Development (LID) principles and BMPs need to be a part of the sustainable design standards. Don't forget that Complete Streets can also include innovative stormwater management approaches.

8.7 City of Tallahassee Strategic Plan 2024

Objective 1A. Invest $25 million through 2024 in stormwater capacity enhancements to improve water quality, and mitigate flooding, in the urban service area.

Comment: Sadly, the explanation only discusses "stormwater drainage upgrades" instead of "stormwater management upgrades" despite the focus on improving water quality.

Objective 4B. Be a Leader in Environmental Stewardship

5 Year Target 5. Reduce the number of impaired water bodies.

Comment: Excellent objective but should also seek to protect healthy water bodies to prevent them from becoming impaired water bodies.

8.8 City of Tallahassee Fertilizer Ordinance (2009)

Section 9-121. Definitions

Comment: Revisions below are to bring the City's Fertilizer Ordinance into consistency with the 2015 Florida Model Ordinance.

City approved best management practices training program means a training program approved by the administrator that includes at a minimum:

(1) The most current version of the "Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, 2020 ~~June 2002~~," as revised; and

Commercial fertilizer applicator, except as provided in 482.1562(9) F.S., means any person who applies fertilizer for payment or other consideration to property not owned by the person or firm applying the fertilizer or the employer of the applicator. ~~on turf and/or landscape plants in the city in exchange for money, goods, services or other valuable consideration.~~

Low maintenance zone means an area a minimum of ten (10) ~~six~~ feet wide adjacent to water courses which is planted and managed in order to eliminate the need for fertilization and minimize the need for watering, mowing, etc.

Prohibited application period means the time period during which a flood watch or warning, or a tropical storm watch or warning, or a hurricane watch or warning, ~~or a three-day cone of uncertainty~~ is in effect for any portion of Leon County, issued by the National Weather Service, or if heavy rain is likely ~~expected.~~

Readily available nitrogen means the water soluble fraction of formulated fertilizer determined by the sum of the percentage of nitrate and ammoniacal nitrogen plus other water soluble nitrogen and/or urea nitrogen in the guaranteed analysis section of the label.

Comment: Please note the above definition is not in the Florida Model Ordinance, 2015, while the definitions below are in it.

"Saturated soil" means a soil in which the voids are filled with water. Saturation does not require flow. For the purposes of this ordinance, soils shall be considered saturated if standing water is present or the pressure of a person standing on the soil causes the release of free water. [Guidance: Some have questioned the enforceability of practical field definitions which should be considered before adoption.]

"Slow Release," "Controlled Release," "Timed Release," "Slowly Available," or "Water Insoluble Nitrogen" means nitrogen in a form which delays its availability for plant uptake and use after application, or which extends its availability to the plant longer than a reference rapid or quick release product.

"Urban landscape" means pervious areas on residential, commercial, industrial, institutional, highway rights-of-way, or other nonagricultural lands that are planted with turf or horticultural plants. For the purposes of this section, agriculture has the same meaning as in s. 570.02.

Section 9-123. Timing of fertilizer application.

No applicator shall apply fertilizers to turf and/or landscape plants during the prohibited application period, or to saturated soils.

Comment: To be consistent with Florida Model Ordinance.

Section 9-126. Fertilizer free zones.

Fertilizer shall not be applied within three feet of any pond, stream, water course, lake, drainage ditch, or wetland as defined by the Florida Department of Environmental Protection (Chapter 62-340, Florida Administrative Code) or from the top of a retaining wall associated with any of these features. If more stringent City Code regulations apply, this provision does not relieve the requirement to adhere to the more stringent regulations. See chapter 5 of the Tallahassee Land Development Code. Newly planted turf and/or landscape plants may be fertilized in this zone only for the first 60-day establishment period.

Comment: Since Section 9-128 requires the use of deflector shields the three feet buffer is appropriate instead of the ten feet wide buffer in the Model Ordinance.

Section 9-127. Low maintenance zones.

A voluntary ten (10) ~~six~~ foot low maintenance zone is strongly recommended, but not mandated, from any pond, stream, water course, lake, wetland or from the top of a retaining wall associated with any of these features. A swale/berm system is recommended for installation at the landward edge of this low maintenance zone to capture and filter runoff. No mowed or cut vegetative material should be deposited or left remaining in this zone or deposited in the water. Care should be taken to prevent the over-spray of aquatic weed products in this zone. If more stringent city

regulations apply, this provision does not relieve the requirement to adhere to the more stringent regulations. See chapter 5 of the Tallahassee Land Development Code.

Comment: To be consistent with Florida Model Ordinance.

Section. 9-130. – Training and certification; licensing of Commercial Applicators; presence on site of trained applicator during application of fertilizer.

(a) All applicators of fertilizer within the city, other than private homeowners on their own property, must be certified as provided under this section. To obtain certification, an applicator shall successfully complete a city-approved best management practices training program as defined in this article. Upon successful completion of the best management practices training program and compliance with the requirements in this article, a certificate of completion and a certification card will be issued to the applicator. For persons certified on or after January 1, 2014, the certification shall be valid for a period of four years. For persons certified before January 1, 2014, the certification shall be valid for a period of three years. Persons working as employees and under the direct and physical supervision of commercial applicators that hold a current certificate of completion and certification card shall be exempt from the requirement to complete a city-approved best management practices training program.

(b) During application of any fertilizer governed by this article, the applicator shall abide by best management practices. At least one person holding a current city-approved best management practices training certificate shall be present at all times on any job site while work applying fertilizer is in progress.

(c) Homeowners, and any other applicators not otherwise required to be certified are encouraged to follow the requirements of this article as well as the recommendations of the University of Florida IFAS Florida Yards and Neighborhoods program when applying fertilizers.

(d) Persons holding a certificate of training issued in conjunction with the Florida Green Industries best management practices Program for protection of water resources in the state; or, other state approved certificate of training or, a certification issued by another local government, that includes at a minimum "Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, 2020 ~~June 2002~~," or newer as the basis for instruction, may obtain certification by the city after contacting the city's water resources engineering division and presenting proof of the currently active status of training as described in subsection (a), and attesting that he/she has received and read a copy of this article. The water resources engineering division may adopted policies related to this exception, and shall maintain a list of approved alternative training programs.

(e) Licensing of Commercial Applicators

All commercial applicators of fertilizer within the City shall have and carry in their possession at all times when applying fertilizer, evidence of certification by the Florida Department of Agriculture and Consumer Services as a Commercial Fertilizer Applicator per 5E-14.117(18) F.A.C.

Comment: To be consistent with Florida Model Ordinance.

Section 9-129. Exemptions.

The provisions set forth above in this article shall not apply to:

(1) Bona fide farm operations as defined in the Florida Right to Farm Act, F.S. § 823.14, provided that fertilizers are applied in accordance with the appropriate best management practices manual adopted by the state department of agriculture and consumer services, office of agricultural water policy for the crop in question.

(2) Other properties not subject to or covered under the Florida Right to Farm Act that have pastures used for grazing livestock provided that fertilizers are applied in accordance with the appropriate best management practices manual adopted by the state department of agriculture and consumer services, office of agricultural water policy for the crop in question.

Comment: Please note that in the 2015 Model Ordinance the requirement to apply fertilizers in accordance with appropriate BMP manuals adopted by FDACS was deleted. Personally, I believe that the language in the City's Ordinance is appropriate for achieving the goals of this project and should remain.