Land and Water Quality Protection in Hampton Roads

Phase III

DRAFT

Hampton Roads Planning District Commission

Virginia Coastal Zone
MANAGEMENT PROGRAM

HAMPTON ROADS PDC
PLANNING DISTRICT COMMISSION

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

November 2014

PEP14-07

HAMPTON ROADS PLANNING DISTRICT COMMISSION
RANDY R. KEATON
INTERIM EXECUTIVE DIRECTOR

CHESAPEAKE
JAMES E. BAKER
AMAR DWARKANATH
LONNIE CRAIG
DEBBIE RITTER
ELLA P. WARD

FRANKLIN
BARRY CHEATHAM
R. RANDY MARTIN

GLOUCESTER COUNTY
BRENDA GARTON
JOHN C. MEYER JR.

HAMPTON
MARY BUNTING
CHRIS SNEAD
GEORGE WALLACE

ISLE OF WIGHT COUNTY
ANNE SEWARD
DELORES DARDEN

JAMES CITY COUNTY
MARY K. JONES
BRYAN J. HILL

NEWPORT NEWS
JAMES M. BOUREY
SAUNDRA N. CHERRY
McKINLEY L. PRICE

NORFOLK
PAUL D. FRAIM
MARCUS JONES
THOMAS R. SMIGIEL
ANGELIA WILLIAMS
VACANT

Executive Committee Member

POQUOSON
W. EUGENE HUNT JR.
J. RANDALL WHEELER

PORTSMOUTH
JOHN L. ROWE JR.
KENNETH I. WRIGHT

SMITHFIELD
PETER STEPHENSON
T. CARTER WILLIAMS

SOUTHAMPTON COUNTY
MICHAEL W. JOHNSON
BARRY PORTER

SUFFOLK
SELENA CUFFEE-GLENN
LINDA T. JOHNSON

SURRY COUNTY
TYRONE W. FRANKLIN
JOHN M. SEWARD

VIRGINIA BEACH
ROBERT M. DYER
BARBARA M. HENLEY
LOUIS R. JONES
JOHN MOSS
AMELIA ROSS-HAMMOND
JAMES K. SPORE
JOHN E. UHRIN

WILLIAMSBURG
CLYDE A. HAULMAN
JACKSON C. TUTTLE

YORK COUNTY
THOMAS G. SHEPPERD JR.
VACANT

PROJECT STAFF

WHITNEY KATCHMARK	PRINCIPAL WATER RESOURCES ENGINEER
BENJAMIN McFARLANE	SENIOR REGIONAL PLANNER
JENNIFER TRIBO	SENIOR WATER RESOURCES PLANNER
SARA KIDD	SENIOR REGIONAL PLANNER
MICHAEL LONG	GENERAL SERVICES MANAGER
CHRISTOPHER W. VAIGNEUR	ASSISTANT GENERAL SERVICES MANAGER
JENNIFER COLEMAN	ADMINISTRATIVE ASSISTANT

DRAFT

LAND AND WATER QUALITY PROTECTION IN HAMPTON ROADS
PHASE III

This report was funded, in part, by the Virginia Coastal Zone Management Program at the Virginia Department of Environmental Quality through Grant # NA13NOS4190135 of the U.S Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended.

The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S Department of Commerce, NOAA or any of its subagencies.

Federal financial assistance to this project amounted to $84,600, approximately 100% of the total cost.

Preparation of this report was included in the HRPDC Unified Planning Work Program for FY 2013-2014, approved by the Commission at its Quarterly Meeting of April 18, 2013, and in the HRPDC Unified Planning Work Program for FY 2014-2015, approved by the Commission at its Executive Committee Meeting of June 19, 2014.

DRAFT

Prepared by the staff of the
Hampton Roads Planning District Commission

NOVEMBER 2014

DRAFT

This page left intentionally blank.

REPORT DOCUMENTATION

TITLE:
Land and Water Quality Protection in Hampton Roads Phase III

REPORT DATE
November 2014

GRANT/SPONSORING AGENCY
DEQ/NOAA/LOCAL FUNDS

AUTHORS:
Sara J. Kidd, GISP
Benjamin J. McFarlane, AICP

ORGANIZATION NAME, ADDRESS AND TELEPHONE
Hampton Roads Planning District Commission
723 Woodlake Drive
Chesapeake, Virginia 23320
(757)420-8300
http://www.hrpdcva.gov

ABSTRACT
This report provides a summary of the third year of the Hampton Roads Planning District Commission's work under a Section 309 Grant from the Virginia Coastal Zone Management Program. The goal of this work is to develop implementable policies, which will assist local governments in addressing the requirements of the new Virginia Stormwater Management Regulations and the Chesapeake Bay Total Maximum Daily Load. The report contains two major sections. The first section continues work started in the second year focusing on potential policy and ordinance changes for local governments to consider. These changes have been refined and presented as specific modifications to local ordinances. The second section provides examples of how local governments can use geographic information systems (GIS) to model the physical and environmental impacts of some of these proposed changes.

ACKNOWLEDGEMENTS
This report was funded, in part, by the Virginia Coastal Zone Management Program at the Virginia Department of Environmental Quality through Grant # NA13NOS4190135 from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, under the Coastal Zone Management Act of 1972, as amended. The views expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Department of Commerce, NOAA, or any of its sub-agencies.

This report was prepared by the Hampton Roads Planning District Commission (HRPDC) staff in cooperation with the member localities. Preparation of this report was included in the HRPDC Unified Planning Work Program for Fiscal Year 2013-14, approved by the Commission at its Quarterly Meeting of April 18, 2013, and in the HRPDC Unified Planning Work Program for Fiscal Year 2014-2015, approved by the Commission at its Executive Committee Meeting of June 19, 2014.

DRAFT

Virginia Coastal Zone MANAGEMENT PROGRAM

DRAFT

This page left intentionally blank.

TABLE OF CONTENTS

Table of Contents i

List of Figures iii

Introduction 1

Recommendations for Enforceable Policies Related to Land Development and Water Quality 3

Reducing Impervious Cover requirements 4

Street Width 4

Minimum Off-Street Parking Requirements 6

Shared Parking 8

Parking Lot Standards 11

Setbacks 12

Street Frontage 14

Driveways 15

Promoting redevelopment and Protecting Natural Resources 17

Transfer of Development Rights 17

Cluster Development 20

Removing Impediments to Stormwater Management BMPs 25

Vegetated Buffers 25

Modeling Development Impacts for Use in Comprehensive Planning 28

Minimum Parking Requirements Analysis 28

Model Setup 31

DRAFT

Results 35

Transfer of Development Rights Analysis 36

Current TDR Program 36

Scenarios 39

Results 39

Discussion 43

Conclusions and Next Steps 44

Appendix A – Local Code Assessments 45

Appendix B – Shared Parking Agreements 64

DRAFT

LIST OF FIGURES

Figure 1: Character Districts in Norfolk 29

Figure 2: Buildings by selected zoning classes in Norfolk 30

Figure 3: Parking requirements model assumptions 32

Figure 4: Minimum Parking Requirements Model Scenarios 34

Figure 5: Summarized results of minimum parking requirements analysis 35

Figure 6: Graphs of change in parking area by zoning district 35

Figure 7: City of Suffolk Zoning Codes and Designations 37

Figure 8: Existing TDR areas in Suffolk 38

Figure 9: TDR analysis scenarios 39

Figure 10: TDR model inputs (see Figure 7 for zoning codes) 40

Figure 11: Results of TDR build-out analysis 40

Figure 12: Alternative Scenario 1 for TDR Analysis 41

Figure 13: Alternative Scenario 2 for TDR Analysis 42

DRAFT

DRAFT

INTRODUCTION

In October 2013, the Hampton Roads Planning District Commission (HRPDC) was awarded a grant under Section 309 of the Coastal Zone Management Act, as amended, from the Virginia Coastal Zone Management Program to continue efforts to assist local governments in Hampton Roads in implementing required and recommended land development and environmental protection practices in response to the Chesapeake Bay Total Maximum Daily Load (TMDL) and revised Virginia Stormwater Management Regulations. This project was included as part of the Land and Water Quality Protection section of Virginia's Section 309 Cumulative and Second Impacts Strategies for 2011-2016 and is part of a five-year planned program. This specific grant project builds upon work done in the previous two years. The first year focused on identifying the impacts of new water quality regulations on local governments and identifying potential tools local governments could use to address those impacts. The second year focused on refining those tools, and resulted in the development of a guidance document for Coastal Plain stormwater best management practices, an assessment of local codes for opportunities for revisions, and a demonstration of how geographic information systems can be used to inform policy development and site planning by taking water quality regulations into account.

This third year consists of two parts. The first part continues the refinement of recommendations to suburban and urban localities for ordinance changes that may assist those communities in meeting the requirements and goals of the Chesapeake Bay TMDL and the Virginia Stormwater Management Regulations. Policy recommendations are divided into three categories: those relating to impervious cover, those related to the siting of development, and those related to stormwater best management practices. Specific amendments to local ordinances for both Norfolk and Suffolk, the pilot localities for this project, are provided along with the policy recommendations.

The second section combines the lessons and techniques learned during the first two years related to geographic information systems to demonstrate how localities can model the impacts of proposed changes on the built and natural environment. Two analyses are included. The first is an assessment of how changes in parking regulations such as quantities required and size requirements can affect the total availability of parking and the total amount of impervious surface created by parking. The second is an assessment of how changes to a local transfer of development rights program can affect the total amount of development that is available to transfer within a locality.

DRAFT

The goal of this project is to identify and develop implementable policies to assist local governments in addressing the requirements of the new Virginia Stormwater Management Regulations and the Chesapeake Bay Total Maximum Daily Load. This report is intended to be a reference for the HRPDC staff and the Cities of Norfolk and Suffolk in considering amendments to local plans, policies, and ordinances.

DRAFT

RECOMMENDATIONS FOR ENFORCEABLE POLICIES RELATED TO LAND DEVELOPMENT AND WATER QUALITY

In the first year of this Section 309 grant, the HRPDC staff completed an assessment of the impact of new water quality regulations, specifically the Chesapeake Bay Total Maximum Daily Load and new Virginia Stormwater Management Regulations, on Hampton Roads localities. A related component provided an overview of several methodologies and tools that could be used by localities to review their ordinances and policies for potential changes. As part of this, the HRPDC staff also compiled a list of potential policies that could be used to help improve local water quality while also meeting the requirements of the new regulations.

The second year focused on improving this guidance and conducting an assessment of local policies in two pilot localities, Norfolk and Suffolk, whose staffs volunteered to collaborate with the HRPDC staff on this effort. The HRPDC staff met with both staffs to discuss findings and areas of interest. There were two main lines of inquiry. First, localities were interested in identifying stormwater best management practices that were best suited for their environments. This resulted in a "Coastal Plain Stormwater BMP Guide," which localities could use to educate developers or update their design guidelines and facilities manuals. The second focus was on using the assessment tools identified in the first year to evaluate each localities codes and ordinances to develop a baseline for how they compared to various recommendations.

The third year has focused on continuing the policy analysis from the second year by using the code assessments (included in Appendix A) to identify specific changes localities can make to their codes and ordinances. These changes are divided into three categories:

1) Reducing Impervious Cover Requirements
2) Promoting Redevelopment and Protecting Natural Resources
3) Removing Impediments to Stormwater BMPs

Reducing impervious cover requirements can potentially reduce the costs of development both in terms of costs to developers and in environmental degradation. Adopting these policies may help localities to continue to develop in spite of the higher costs associated with complying with the new stormwater regulations. Promoting redevelopment can help localities meet their nutrient load reduction requirements under the Chesapeake Bay TMDL directly, since reductions achieved from redevelopment

DRAFT

count for the local government. Removing impediments to using various stormwater BMPs can help align various local goals while also giving developers more freedom to design projects as they see fit.

Each policy discussion follows a similar format. The first section provides background information on the policy and includes at least one recommendation, a primary benefit to adopting the policy, and secondary benefits. The second section discusses the implementation of the policy in a suburban context, using Suffolk as an example. The third section discusses the implementation of the policy in an urban setting, using Norfolk as the example. For both of these sections, a specific code change or addition is suggested that would help implement the general policy.

REDUCING IMPERVIOUS COVER REQUIREMENTS

STREET WIDTH

Minimum street width requirements are generally based on a combination of factors such as design speeds, projected traffic volume, location (urban or rural), and whether or not parking lanes will be present. Street widths are a potential source of conflict between various city departments, including public works (those responsible for constructing and maintaining the streets), planning (those responsible for planning where streets will go and what the surrounding environment will be), and emergency services (which rely on streets to quickly and safely access emergencies). In particular, planners may want narrower streets to promote pedestrian safety, slow traffic, or create a more please built environment. In many cases emergency services prefer wider streets based on the need to move large vehicles to the sites of emergencies such as fires and car accidents.

A common street width requirement for many communities is a minimum street lane width of twelve (12) feet per lane. However, in recent years many organizations and state agencies, including the Virginia Department of Transportation, have recognized the value of reducing minimum lane widths for some roadways, particularly those with lower traffic volumes or in rural settings. However, many local policies have not been updated to reflect these state-wide policy changes.

DRAFT

Recommendation: Cities should consider lowering their minimum road width standards to those established in VDOT's Road Design Manual Geometric Design Standards[1] and Secondary Street Acceptance Requirements.[2] City road standards should be diversified to reflect different types of neighborhoods and projected traffic volumes.

Primary Benefits: Reduction in impervious surface

Secondary/Multiple Benefits: Lower maintenance costs, more pedestrian-friendly streets

SUBURBAN IMPLEMENTATION (SUFFOLK):

Suffolk's road standards are located in Section 31-612 of the city's Unified Development Ordinance. The city should consider amending "Table 612-1.3: Local Street Requirements" to lower the minimum road widths for local residential roads as follows:

Road Type and Volume	Current Minimum Pavement Width	Recommended Minimum Pavement Width
Rural ADT ≤ 250	28'	18'
Rural ADT 251 – 400	28'	18'
Rural ADT 401 – 2,000	36'	22'
Urban ADT ≤ 250	28'	20'
Urban ADT 251 – 400	28'	20'
Urban ADT 401 – 2,000	36'	22'

URBAN IMPLEMENTATION (NORFOLK):

Norfolk's road standards are located in Section 42.5-7 of the city's Code of Ordinances. The current standard prescribes widths for different categories of roads (e.g. 90' for arterial roads, 60' for collector

[1] Appendix A – last revised January 2014
[2] Appendix B (1) – last revised July 2014

DRAFT

roads, and either 60' or 50' for local roads, depending on the surrounding uses). Most of Norfolk's roadways allow for on-street parking in addition to two-way traffic. Therefore, for local roads the city should consider adopting a standard based on lane width in addition to land use. Specifically, the city should consider adopting a 10' minimum lane width for traffic lanes and an 8' minimum lane width for parking lanes.

MINIMUM OFF-STREET PARKING REQUIREMENTS

Off-street parking requirements are generally defined according to land use, from which localities project how much parking will be required at any given time to meet the demand by that land use. For example, office buildings have large parking requirements since there are many people traveling to those buildings at the same time, while small retail establishments may have lower requirements since there is greater client turnover during the day. In many cases, traditional minimum parking requirements, particularly in suburban areas, result in excess parking at all but the most congested times. This results in both an excess of impervious cover, which damages the environment, and a built environment that is not pedestrian friendly.

Recommendation: Reduce or eliminate minimum parking requirements, particularly for office or retail uses.

Primary Benefits: Reduction in impervious surface

Secondary/Multiple Benefits: lower construction and land costs to developers, more pedestrian-friendly environment

SUBURBAN IMPLEMENTATION (SUFFOLK):

Suffolk's parking standards are found in Section 31-606 of the city's Unified Development Ordinance. The city should consider amending "Table 606-2: Off-Street Parking Requirements" to lower minimum parking requirements for professional office uses.

DRAFT

Use	Current Minimum Parking Requirement	Recommended Minimum Parking Requirement
Office	4 per 1,000 Gross Floor Area	3 per 1,000 Gross Floor Area

URBAN IMPLEMENTATION (NORFOLK):

Norfolk's parking standards are found in Section 15-7 of the city's Zoning Ordinance and have been recently updated to lower parking requirements for most uses in the city's most intensely developed areas. These new off-street parking requirements are based on a system that divides the city into three types of areas: downtown, traditional, and suburban. Downtown areas require the least off-street parking. For traditional and suburban areas, the city should consider reducing parking requirements by amending "Table 15-A – Table of Minimum Parking Requirements" to require 3 spaces per 1,000 gross square feet for professional office uses.

Use	Area	Current Minimum Parking Requirement	Recommended Minimum Parking Requirement
Office	Traditional	1 space per 300 SF	3 spaces per 1,000 SF
Office	Suburban	1 space per 250 SF	3 spaces per 1,000 SF

In addition to lowering overall minimum parking requirements, both suburban and urban communities can encourage developers to locate near mass transit by providing land uses within a certain distance of a mass transit stop a discount on parking requirements. Norfolk is served by several mass transit lines provided by Hampton Roads Transit, including light rail, bus, express bus, and ferry. Suffolk is served by four bus lines provided by Virginia Regional Transit. Currently, Norfolk provides for a reduction in off-street parking requirements for non-residential uses located within 1,500 feet of a light rail station (Zoning Ordinance Section 15-3.1 (b)). Norfolk should consider developing a similar standard for bus stations or express bus stations:

DRAFT

> Section 15-3.1 (b) Reduction for proximity to mass transit. For any nonresidential use located within one thousand five hundred (1,500) feet of a light rail transit station, the required number of parking spaces determined under the general rule, above, shall be reduced by twenty-five (25) percent. For any nonresidential use located within five hundred (500) feet of a bus transit stop, the required number of parking spaces determined under the general rule, above, shall be reduced by ten (10) percent. This reduction shall not apply in Transit Oriented Development (TOD) zoning districts.

Suffolk should consider adopting a reduction for non-residential uses located near bus stations and make the following revision.

> Section 31-606 (a) (9) Reduction for proximity to mass transit. For any nonresidential use located within five hundred (500) feet of a bus transit stop, the required number of parking spaces determined according to Table 606-2, above, shall be reduced by ten (10) percent.

SHARED PARKING

One of the main drivers of excess parking, particularly in urban areas, is the requirement for each business or facility to have its own separate off-street parking. In many cases, different land uses experience different levels of demand for parking at different times of the day. For example, offices require parking primarily between 8:00 a.m. and 5:00 p.m., while residential areas require the most parking during the night. Shared parking arrangements are one method cities and counties can use to reduce overall parking. For mixed-use developments with one overall owner or property manager, implementing a shared parking arrangement can be as simple as calculating overall parking requirements using a formula provided by the city or county. For areas with multiple property owners, legal agreements may be necessary or required to provide one property owner with the legal right to use excess parking owned by another property owner and to count it as meeting a local off-street parking requirement.

Recommendation: Cities should consider encouraging shared parking arrangements in urban or mixed use areas by enacting shared parking ordinances, publishing model arrangements or agreements on

DRAFT

their municipal websites, and promoting these arrangements with developers during the project review and site planning process.

Primary Benefits: Reduction in impervious surface

Secondary/Multiple Benefits: lower construction and land costs to developers, more pedestrian-friendly environment

SUBURBAN IMPLEMENTATION (SUFFOLK):

Suffolk's Unified Development Ordinance contains a provision for shared parking arrangements, which is found in Section 31-606 (4). The provision allows for off-street parking within 200 feet of the subject property as long as the off-site property has excess parking and the developer provides a written agreement allowing use of the parking. For on-site parking, section C and Table 606-1 provide a formula for calculating the total parking required for a mixed use site, which is replicated below. A developer proposing a shared parking arrangement calculates the typical minimum parking requirement (as found in Section 31-606 Table 606-2), multiplies each requirement by the percentage in Table 606-1, and sums each column. The column with the highest value is the required minimum for the development.

Suffolk Unified Development Ordinance Section 31-606 Table 606-1

(A) Land Use	Weekday		Weekend		(F) Nighttime (Midnight – 6 a.m.)
	(B) Daytime (9 a.m. – 4 p.m.)	(C) Evening (6 p.m. – Midnight)	(D) Daytime (9 a.m. – 4 p.m.)	(E) Evening (6 p.m. – Midnight)	
Office/Industrial	100%	10%	10%	5%	5%
Retail	60%	90%	100%	70%	5%
Hotel	75%	100%	75%	100%	75%
Restaurant	50%	100%	100%	100%	10%
Entertainment/Commercial	40%	100%	80%	100%	10%

DRAFT

Residential uses are not included in the city's current policy. Examples from other communities with shared parking ordinances range from 40% to 60% during the day to 100% at night.[3] The city should consider incorporating residential uses into its shared parking policies, with the following recommended percentages.

(A) Land Use	Weekday		Weekend		(F) Nighttime (Midnight – 6 a.m.)
	(B) Daytime (9 a.m. – 4 p.m.)	(C) Evening (6 p.m. – Midnight)	(D) Daytime (9 a.m. – 4 p.m.)	(E) Evening (6 p.m. – Midnight)	
Residential	50%	80%	60%	80%	100%

URBAN IMPLEMENTATION (NORFOLK):

Norfolk's Zoning Ordinance contains a provision for shared parking in Section 15-5.2 and provision for off-site parking in Section 15-5.1, which allows for parking from other uses within 500 feet of the subject property as long as the off-site property has excess parking and the developer provides a written agreement allowing use of the parking. However, the provision contains no specific metrics and appears to be implemented at the discretion of the city's zoning administrator. The city should consider adopting a formula-based approach to shared parking, similar to the percentages used by Suffolk and other communities.

In addition to improving their shared parking ordinances, both Suffolk and Norfolk should consider promoting shared parking by providing examples of shared parking agreements for offsite parking and conveying this information to developers as appropriate during the project review and planning process. A typical shared parking agreement would contain several clauses:

[3] http://www.vtpi.org/tdm/tdm89.htm
http://www.ci.san-bernardino.ca.us/pdf/DevSvcs/std_dwgs/files/SHARED.pdf
http://www.mapc.org/resources/parking-toolkit/strategies-topic/shared-parking/examples-offstreetparking

DRAFT

- Identities of the party that owns the parking and the party that is leasing it
- Locations of the properties involved in the agreement
- Duration of the agreement
- Extent and limitations of the agreement (such as times and days of the week the parking can be used)
- Responsibilities for maintenance, utilities, and taxes
- Signage requirements
- Enforcement and cooperation measures
- Insurance requirements
- Indemnification
- Termination
- Supplemental covenants

In addition, these agreements can usually only be terminated with the approval of the local zoning administrator or planning director after both parties demonstrate that they have met any standard off-street parking requirements. Examples of shared parking agreements from Portland, San Diego, and Cary, NC, can be found in Appendix B.

A non-regulatory step that both suburban and urban communities can take to promote shared parking is to include it as part of an information packet for developers or on various forms that developers must complete as part of the site development process. Norfolk and Suffolk should both consider having city staff promote shared parking with developers. Communities should also consider performing regional parking analyses in urban or mixed used areas to determine whether or not excess parking exists.

PARKING LOT STANDARDS

Minimum parking requirements (the number of spaces required) are one driver of the total amount of impervious cover from parking lots. Another factor is the minimum size of each parking space. While reducing the total number of spaces required can have a more significant effect, requiring smaller parking spaces can still result in improvements to the environment and lower costs to developers. In addition to lowering overall requirements, cities and counties can allow for some minimum parking requirements to be fulfilled by compact car or motorcycle spaces, or with bicycle parking facilities.

DRAFT

Recommendation: Cities should require standard parking spaces (those angled ninety degrees (90°) from a curb) to have a minimum stall width of nine (9) feet and a minimum stall length of eighteen (18) feet.

Primary Benefit: Reduction in impervious surface

Secondary/Multiple Benefits: lower construction and land costs to developers, more pedestrian-friendly environment

SUBURBAN IMPLEMENTATION (SUFFOLK):

Design standards for off-street parking spaces are found in Section 31-606 (a)(9)(C) of Suffolk's Unified Development Ordinance. The current minimum width for standard off-street parking spaces is nine (9) feet and the current minimum length is eighteen (18) feet. Suffolk meets the recommended standards.

URBAN IMPLEMENTATION (NORFOLK):

Design standards for motor vehicle parking areas are found in Section 15-4 of Norfolk's Zoning Ordinance. The current minimum width for a standard, 90° parking space is eight (8) feet and the current minimum length is eighteen (18) feet. Norfolk meets or exceeds the recommended standard.

SETBACKS

Setbacks are designed to provide some regularity to the built environment by encouraging a pattern of development. Setback requirements or minimum yard sizes are generally provided for front yards, back yards, and side yards, and are expressed as distances from a lot line. In urban areas setbacks are small; in some cases, setbacks are not even required (these cases are referred to as zero lot line requirements). In areas with less development where preserving views or rural character is important, setback requirements are generally larger. Front setback requirements have an impact on watershed health

DRAFT

since they result, along with driveway size and design requirements, in a minimum amount of impervious surface that must be built along with each house.[4] Setback requirements also can influence the layout of roadways within a development. Reducing front setbacks can lower the amount of impervious cover that developers must include in a development. Reducing setbacks in general can reduce the amount of area within a development devoted to roadways, leaving more room for development, open space, or natural resource preservation.

Recommendation: Cities should consider lowering their minimum setback requirements (front, back, and side).

Primary Benefit: reduction in impervious cover

Secondary/Multiple Benefits: reduction in land disturbance, protection of natural resources

SUBURBAN IMPLEMENTATION (SUFFOLK):

Minimum setback requirements are specified in Section 31-407 (c) of Suffolk's Unified Development Ordinance. Minimum front setbacks for residential areas range from twenty (20) feet for the more dense residential zoning classifications to forty-five (45) feet for the more rural classifications. Minimum rear setbacks range from ten (10) to thirty (30) feet. Minimum side setbacks range five (5) to twenty (20) feet.

Zoning District	Minimum Front Setback	Minimum Rear Setback	Minimum Side Setback
A	50'	30'	20'
RR	45'	30'	20'
RE	45'	30'	20'
RL	35'	30'	15'
RLM	30'	30'	15'
RM	25'	25'	10'
RC	20'	10'	5'
RU	20'	10'	5'

[4] The minimum amount of impervious surface associated with a front yard setback is calculated by multiplying the setback by the minimum driveway width.

DRAFT

Suffolk should consider reducing the minimum setback requirements for A, RR, RE, RL, and RLM zones to those of the RM district (25' for front and rear setbacks and 10' for side setbacks). At a minimum, Suffolk should consider this reduction for the RL and RLM zoning districts.

URBAN IMPLEMENTATION (NORFOLK):

Minimum setback requirements for residential developments are located in Chapter 4 of the city's zoning ordinance. The minimum front setback for all single-family residential zoning districts is the lower of either the average of the two adjacent properties or twenty-five (25) feet. The minimum rear setback for all single-family residential zoning districts is twenty-five (25) feet. Minimum side setbacks range from three (3) to ten (10) feet. Norfolk meets or exceeds the recommended standard.

STREET FRONTAGE

Street frontage requirements are generally implemented to control the character of development and, in some cases, to limit the total amount of development. Minimum street frontage requirements control how wide lots must be along roadways; put another way, a minimum amount of street frontage is also a minimum length of roadway that must accompany each residence. Some localities also control the amount of development in rural areas by limiting what roads qualify as acceptable frontage. If only certain roads are included, the number of homes that can be built will also be limited, even if the total area available for building is large. From a water quality perspective, large street frontages result in longer lengths of road with greater amounts of impervious cover.

Recommendation: Cities should consider lowering their minimum street frontage requirements.

Primary Benefit: reduction in impervious cover

Secondary/Multiple Benefits: reduction in land disturbance, protection of natural resources

SUBURBAN IMPLEMENTATION (SUFFOLK):

DRAFT

Minimum street frontage requirements are specified in Section 31-407(c) of Suffolk's Unified Development Ordinance. These requirements range from fifty (50) feet for the RU zoning classification to 150 feet for the A, RR, and RE zoning classifications. Suffolk should consider reducing the minimum frontage requirements for the rural zoning classifications (A, RR, and RE) from 150 to 100 feet.

URBAN IMPLEMENTATION (NORFOLK):

Norfolk's zoning ordinance does not specify minimum street frontages for residential areas; however, it does specify minimum lot widths. For single-family residential units, the minimum lot width requirement ranges from forty (40) feet to 100 feet. Norfolk should consider reducing the minimum lot width requirement for the R-1, R-2, R-3, R-4, and R-5 zoning classifications from 100 feet to 80 feet.

Zoning Classification	Current Minimum Lot Width	Recommended Minimum Lot Width
R-1	100'	80'
R-2	100'	80'
R-3	100'	80'
R-4	100'	80'
R-5	100'	80'
R-6	75'	75'
R-7	60'	60'
R-8	50'	50'
R-9	40'	40'

DRIVEWAYS

Minimum driveway requirements for residential areas are the equivalent of off-street parking requirements for single-family detached or two-family attached developments. Local regulations generally prescribe minimum and maximum widths for driveways as well as a limit on the number of driveways a single residence may have. Requirements are generally expressed in either absolute widths or as a percentage of the total lot width. Driveway requirements can increase the amount of impervious cover by requiring their presence, their minimum dimensions, and the materials they are to be

DRAFT

constructed of. Combined with front setback requirements, driveway requirements can result in a significant amount of mandated impervious cover.

Recommendation: Cities should consider lowering the minimum dimensions specified for driveways. Cities should also consider explicitly allowing for driveways to be surfaced with permeable surfaces that meet necessary performance requirements.

Primary Benefit: reduction in impervious cover

Secondary/Multiple Benefits: reduction in land disturbance

SUBURBAN IMPLEMENTATION (SUFFOLK):

Minimum standards for residential and commercial driveways are identified in Section 31-605(e) of Suffolk's Unified Development Ordinance. The maximum area (in terms of a percentage of the front yard) for driveways and other impervious surfaces depends on zoning. For example, lower density residential lots can have driveways that take up at most 25% of the front yard, while denser residential areas can have up to 50% of the front yard as driveways. The maximum percent of the front lot line is also specified. For most residential lots, the minimum driveway width at the access point is twelve (12) feet, as specified in Suffolk's Public Facilities Manual. For flag lots, the minimum driveway width is nine (9) feet, as specified in Section 31-605(h)(2). Suffolk should consider reducing the minimum access point width for all single-family residential driveways to nine (9) feet.

Standards for driveway surfaces are described in Section 31-605(e) of the Unified Development Ordinance. Specifically, the section identifies asphalt, concrete, and "similar all-weather surface[s]" as acceptable surface materials. Suffolk should consider amending this requirement to allow for permeable surfaces which meet performance standards at the discretion of the public works director or zoning official. A list of qualifying materials should be maintained on the city's website. An example of a potential modification to Section 31-605(e)(1) is below:

Suggested Modifications to Section 31-6

DRAFT

Current: "All driveways, parking areas, and pedestrian ways shall be surfaced with asphalt, concrete, or a similar all-weather surface."

Suggested: "All driveways, parking areas, and pedestrian ways shall be surfaced with asphalt, concrete, or a similar all-weather surface. Permeable materials are encouraged and allowed with the approval of the zoning administrator."

URBAN IMPLEMENTATION (NORFOLK):

Minimum standards for residential driveways are identified in Section 15-4.2(b) of the city's zoning ordinance. Norfolk's ordinance limits the number and maximum width of driveways according to lot width. For the narrowest lots, only one driveway is allowed with a maximum width of ten (10) feet. The typical driveway as described in standard HS-207 of the Norfolk City Design Standards is ten (10) to twenty (20) feet. However, since no minimum width is provided, the city meets the recommended standard.

The surface materials used for residential driveways are identified in Section 15-4.2(b)(1) of the city's zoning ordinance. This section states that driveways "shall be designed to maintain proper drainage, shall consist of an improved surface, and shall not include gravel, dirt, or sand." Norfolk should consider amending this requirement to allow for permeable pavements and similar materials.

PROMOTING REDEVELOPMENT AND PROTECTING NATURAL RESOURCES

TRANSFER OF DEVELOPMENT RIGHTS

Transfers of developments rights, or TDR, programs are designed to protect areas from development by providing a means for property owners to sell the developments rights from properties to be used in more appropriate areas. To do this, a local TDR program identifies both sending and receiving areas and

DRAFT

puts in place a mechanism to record and track the rights transfer. Sending areas are usually areas that a community would like to protect for environmental, cultural, or protective reasons. Examples include farmland, floodplains, and forests. Receiving areas are usually urban cores or other relatively intensely developed areas that have sufficient infrastructure and service capacity to support additional development. The model ordinance developed for Virginia focuses on agricultural preservation.[5] However, TDR programs can be used to preserve other areas and achieve other goals, such as habitat protection, floodplain management, and hazard mitigation. Successful TDR programs allow for the realization of two goals simultaneously: protecting some lands from development while allowing property owners to benefit financially from the development potential of those lands. TDR programs can also encourage redevelopment through the selection of receiving areas.

In Virginia, cities and counties are authorized to adopt TDR programs by § 15.2-2316.2. The enabling legislation provides a list of minimum requirements any local ordinance must meet, as well as some options a locality may include. Transfers are also allowed between counties and adjacent cities through voluntary agreements.

Recommendation: Cities should consider implementing and promoting transfer of development rights (TDR) programs to protect certain areas important to water quality protection from development. Localities should consider identifying areas to include as sending and receiving areas as appropriate and additional incentives to encourage transfers.

Primary Benefit: promotion of redevelopment

Secondary/Multiple Benefits: protection on natural resources, avoidance of development in some areas, reduction in land disturbance, reduction in impervious surface

SUBURBAN IMPLEMENTATION (SUFFOLK):

Suffolk currently has a provision for transferring development rights as part of its incentive zoning programming, which is found in Section 31-409 of the city's Unified Development Ordinance. The ordinance defines sending areas and receiving areas and also contains a provision describing the development rights so created. The ordinance also caps the amount of bonus density that can be

[5] http://www.vdacs.virginia.gov/preservation/pdf/Model%20TDR%20Ordinance.pdf

DRAFT

applied to a receiving site and describes the procedure for transferring development rights between sites.

Eligible sending areas include Agricultural Preservation Sending Areas and Critical Area Sending Areas. Agricultural Preservation Sending Areas must be zoned A, RR, or RE and meet at least one of these three requirements:

1) Rated as Prime Farmland by the Soil Conservation Service or as Important Farmland, Important Forest Land or Important Rangeland land by the Virginia Land Evaluation and Site Assessment (LESA) System and consists of at least 60 contiguous acres.
2) Rated as Prime Farmland by the Soil Conservation Service or as Important Farmland, Important Forest Land or Important Rangeland land by the Virginia Land Evaluation and Site Assessment (LESA) System, and is greater than ten and less than 60 acres, and adjoins a tract of agricultural land which exceeds 60 acres.
3) Be part of an Agricultural or Forestal District (Code of Virginia, §§ 15.2-4300 to 15.20-4314) or a Local Agricultural or Forestal District Code of Virginia, §§ 15.2-4400 to 15.20-4407).

Critical Area Sending Areas can be within any zoning district and include Chesapeake Bay Preservation Act Resource Protection Areas, areas within the designated Flood Plain District (1% annual flood risk floodplain), areas within the Wetlands District, non-tidal wetlands, or areas permanently inundated.

For Agricultural Preservation Sending Areas, 100% of the sending site's development potential may be transferred to receiving sites. For Critical Area Sending Areas, 50% of the sending site's development potential may be transferred to receiving sites.

Based on the city's incentive zoning ordinance, it appears that the maximum amount of development rights that can be transferred to any one receiving parcel is equal to 30% or 35% of the site's base maximum permitted development potential, depending on whether the sending site is preserved as open space or agricultural land.[6]

It is unclear if Suffolk's transfer of development rights ordinance has ever actually been used. This could be a result of insufficient demand, a lack of incentives, or lack of knowledge from property owners and developers. To address these issues, Suffolk should consider engaging the development community,

[6] See Table 409-1: Alternate Incentives in Section 31-409 – Incentive Zoning of Suffolk's Unified Development Ordinance.

DRAFT

publicizing the availability of the program, and amending the program. Specifically, Suffolk should consider the following changes:

1) Expand the Flood Plain District to include the 0.2% annual floodplain, which would increase the amount land considered Critical Areas. (Section 31-416.1 (h)(1))
2) Increase the percentage of development potential transferrable from Critical Area Sending Areas from 50% to 100%. (Section 31-409 (b)(3)(A))
3) Remove or reduce the 60 acre parcel size requirement to meet the threshold for Agricultural Preservation Sending Areas. (Section 31-409 (b)(2)(A)(i))
4) Providing a density bonus, such as 5% or 10%, to transfers of development rights that result in the permanent preservation of floodplains or agricultural areas

URBAN IMPLEMENTATION (NORFOLK):

Norfolk does not currently have an ordinance allowing transfers of development rights. As a city that is almost entirely built out, Norfolk is not a prime candidate for a traditional transfer of development rights program. However, the city's recent focus on sea level rise and floodplain management provides an opportunity to address those issues while promoting redevelopment through a TDR framework. Norfolk should consider adopting a new transfer of development rights program with the goal of allowing development to move from areas of recurrent flooding to downtown areas that are less vulnerable to flooding. Suggested sending areas would be either the 1% annual floodplain or repetitive loss neighborhoods. Suggested receiving areas would be the city's downtown overlay district or areas located near light rail transit stops. In addition to the standard components of a TDR ordinance, Norfolk should consider adopting a provision allowing for agreements involving the removal of existing development and the return of such areas to a natural state. Such a provision could be included in the city's transfer of development rights ordinance or adopted as an official policy which the city works out with each interested developer.

CLUSTER DEVELOPMENT

DRAFT

Cluster developments are a type of residential land development that provides for the same amount of housing as conventional development while protecting important natural resources, such as intact forests, agricultural lands, wetlands, or floodplains, on the larger parcel from development. This is done by concentrating homes on a portion of parcel, such as twenty-five to fifty percent, and placing the rest of the development under a conservation or agricultural preservation easement. In some cases, a public access easement is also included. Cluster developments usually have smaller or no setback and minimum lot size requirements. Cluster developments preserve rural character and have less of an impact on the environment compared to conventional developments. Overall, cluster developments disturb less land and result in less impervious cover (due to fewer miles of roads and shorter setbacks) than conventional developments.

In Virginia, cities and counties are required to enact cluster development ordinances in Virginia under the authority of § 15.2-2286.1 if they have a population growth rate of 10% between the last two decennial censuses and if they have a population density less than or equal to 2,000 people per square mile. In Hampton Roads, this applies to six cities and counties: Chesapeake, Isle of Wight County, James City County, Suffolk, and York County. However, other cities and counties may use the same authority to implement a cluster development ordinance.

City/County	2000 – 2010 Growth Rate	Population Density (population per square mile)	Cluster Development Ordinance Required	Cluster Development Ordinance Adopted
Chesapeake	11.6%	652.0	Yes	Yes
Franklin	2.8%	1045.8	No	Yes
Gloucester County	6.0%	169.2	No	Yes
Hampton	-6.1%	2673.2	No	Yes
Isle of Wight County	18.6%	111.8	Yes	Yes
James City County	39.3%	470.4	Yes	Yes
Newport News	0.0%	2630.0	No	No
Norfolk	3.6%	4486.4	No	No
Poquoson	5.0%	793.2	No	No
Portsmouth	-5.0%	2838.8	No	No
Southampton County	6.2%	31.0	No	Yes

DRAFT

Suffolk	32.8%	211.4	Yes	Yes
Surry County	3.4%	25.3	No	Yes
Virginia Beach	3.0%	1758.9	No	No
Williamsburg	17.3%	1559.3	Yes	Yes
York County	16.3%	624.8	Yes	Yes

Recommendation: Cities and counties should consider adopting cluster development ordinances, including appropriate density incentives, to encourage the protection and preservation of important natural resources.

Primary Benefit: Preservation of natural resources

Secondary/Multiple Benefits: reduction in impervious surface, avoidance of developments in areas vulnerable to flooding, potential promotion of redevelopment

SUBURBAN IMPLEMENTATION (SUFFOLK):

Suffolk currently allows cluster developments by right in some areas of the city. Dimensional and density regulations for cluster developments are found in Section 31-407 (b)(1). Currently, there is no minimum lot size requirement for cluster developments. Cluster developments are allowed in Rural Residential (RR), Rural Estate (RE), Residential Low Density (RL), Residential Low-Medium Density (RLM), Residential Medium Density (RM), Residential Compact (RC), and Residential Urban (RU) zoning districts. Section 31-409 (b) allows for development that would have been allowed on critical areas to be clustered elsewhere on the same project site.[7] A use pattern for cluster developments is located in Section 31-

[7] Critical areas are defined in Appendix A of the Suffolk Unified Development Ordinance as "any lot, parcel or property, or portion thereof, located within the Resource Protection Area of the Chesapeake Bay Preservation Overlay District (Section 31-415), the Flood Plain District (Section 31-416), or the Wetlands District (Section 31-418) or non-tidal wetlands or any areas permanently inundated (such as lakes, ponds, streams and rivers). The Flood Plain District includes those "areas subject to inundation by waters of the 100-year flood. The Wetlands District includes both vegetated and nonvegetated wetlands as defined by § 28.2-1302 of the Code of Virginia. Nonvegetated wetlands are those "unvegetated lands lying contiguous to mean low water and between mean low water and mean high water," while vegetated wetlands are those "lands lying between and contiguous to mean low water and an elevation above mean low water equal to the factor one and one-half times the mean tide range" at that location and which have various defined wetlands species growing upon them.

DRAFT

411. The total number of units allowed for a cluster development in Suffolk is based on four factors and is given as an equation in Section 31-407 (b)(1).

$$D = P \times (A - C - R)$$

D = Total permitted dwelling units

P = Permitted density in dwelling units per acre (based on underlying zoning designation)

A = Total site area (acres)

C = Critical areas (acres)

R = Road and street rights-of-way (acres)

The current cluster provision does not provide for any incentives to developers to pursue cluster development proposals. However, a cluster development can be designed in such a manner to meet certain additional requirements which grant density bonuses. These bonuses are described in Section 31-409, which includes the criteria and calculations used to allocate density bonuses for items such as public park land, open space, agricultural preservation, and preservation of critical areas. The "bonus" allowed for clustering alone appears to be only allowing the maximum by-right amount of development which could occur on a parcel, which may otherwise be impossible due to a combination of minimum lot size requirements and critical areas present on site. However, removing critical areas from the dwelling unit formula may actually penalize cluster developments in areas with floodplains, which would be buildable with conventional developments, as long as they meet the associated higher development standards. In addition, a cluster development also requires between 35% and 50% of the development to be preserved as open space (the requirement for conventional developments is only 3% to 10%.

Based on discussion with Suffolk city staff, it does not appear that the city's current cluster development provisions have been exercised very often or at all by the development community in Suffolk. This may be due to a lack of knowledge of cluster development, a lack of demand for such developments, or other reasons. To address the first issue, the city should consider promoting cluster developments through guidance documents on its website and in communications with developers. To address the second issue, the city should consider implementing a small density bonus for cluster developments, such as 5%

DRAFT

or 10% above the total dwelling units allowable by right.[8] This could take the form of amending the entry for cluster developments in Table 409-2, providing separate entries for cluster and hamlet developments.

Proposed Additions to Table 409-2 (Section 31-409)

(A) Incentive Item	(B) Criteria	(C) Total Dwelling Units or Floor Area	
Cluster	Development of a Cluster option subdivision consistent with § 31-411(d).	D x 1.10	where D = Base calculation of total permitted dwelling units pursuant to § 31-407(b)(1)
Hamlet	Development of a Hamlet option subdivision consistent with § 31-411(e).	See Table 407-1 of this Ordinance.	

In addition, the city should consider amending the formula for total dwelling units for cluster and hamlet dwellings by removing the critical area component, to ensure that development rights are not lost when a developer opts for cluster development over conventional development. The revised formula would be D = P x (A – R).

URBAN IMPLEMENTATION (NORFOLK):

Norfolk currently does not have an ordinance allowing cluster development by right, and, under the requirements of § 15.2-2286.1, it is not required to, since its population density exceeds 2,000 people per square mile. However, a provision allowing planned developments is located in Chapter 27 of the city's zoning ordinance. This provision allows for the use of different development standards (such as lot sizes and setbacks); however, planned developments are allowed only with the approval of the zoning administrator and city council.

Since cluster ordinances are generally designed to function in rural or less dense areas, it may not be appropriate or desirable for Norfolk to adopt a true cluster ordinance. One possible alternative is incentive zoning, under which a locality grants density bonuses to developers in return for meeting certain thresholds that address local public policy goals.[9] Norfolk should consider adopting incentive

[8] Density bonuses for cluster developments are explicitly allowed under § 15.2-2286.1 (C).
[9] Incentive zoning is defined in the Code of Virginia in § 15.2-2201 and authorized in § 15.2-2286 (10).

DRAFT

zoning provisions that award density bonuses similar to Suffolk's existing ordinance, with density bonuses awarded for providing additional open space beyond minimum requirements, protecting vulnerable areas such as floodplains from development, and for redevelopment projects. Obtaining density bonuses would be allowed with a conditional use permit and based on the underlying zoning classification.

REMOVING IMPEDIMENTS TO STORMWATER MANAGEMENT BMPS

VEGETATED BUFFERS

Weeds are a common nuisance, and are treated as such by most local ordinances. These ordinances often require property owners to keep ground vegetation such as grass and weeds below a certain height or be subject to fines. However, nuisance weed ordinances (not to be confused with noxious weed laws and ordinances, which deal with invasive and detrimental species) often do not allow for the development of vegetated buffers, which can have a significant positive impact on water quality. Localities have explicit authority granted by the General Assembly to require the cutting of grass and weeds by property owners, including through property liens and fines.[10] Additional authority to compel the removal of nuisances, including weeds, is provided to cities and towns.[11] Many localities define weeds as non-tree plants that have grown beyond a certain height. In riparian areas, such regulations preclude the use of vegetation as buffers to retain and detain runoff and its associated nutrient pollutants. In addition, these regulations appear to conflict with the goals and aims of the Chesapeake Bay Program and Virginia's Chesapeake Bay Preservation Act, which aim to preserve native vegetation and protect and enhance the quality of the Chesapeake Bay. Such regulations also conflict with recent efforts by the Virginia Coastal Zone Management Program to promote the planting of native vegetation by homeowners, businesses, and local governments.

Recommendation: Localities should consider adopting measures to allow, encourage, and promote the planting of natural vegetation along stream buffers. Specifically, localities should consider adopting exceptions to nuisance weed ordinances for wetlands or Chesapeake Bay Preservation Areas for plantings with approved designs and maintenance agreements.

[10] Code of Virginia § 15.2-901
[11] Code of Virginia § 15.2-1115

DRAFT

Primary Benefits: improved water quality

Secondary/Multiple Benefits: promotion of native vegetation, runoff reduction, reduced erosion of stream banks

SUBURBAN IMPLEMENTATION (SUFFOLK):

Suffolk's provisions for controlling the growth of weeds and other plants is found in Chapter 34 Article IV of the city's Code of Ordinances, which states that "weeds and other foreign growth shall not include any cultivated plants harvested and cut below 15 inches in height at least once each growing season, and commonly grown for food, fodder, or soil enrichment." However, Section 34-108 identifies several areas that are exempted from the ordinance, including agricultural areas, Chesapeake Bay Preservation Act Resource Protection Area buffers, and woodland areas.[12] The city should consider expanding the exemption list to include approved stormwater management best management practices.

URBAN IMPLEMENTATION (NORFOLK):

Norfolk's provisions for controlling the growth of weeds and other plants is contained in Chapter 27, "Nuisances," of the Code of the City, specifically Section 27-2. Nuisances include vegetable matter, among other things, which is defined as "any grass, weeds, bushes, underbrush, poison ivy, poison oak or any vegetable matter which has growth to sufficient height and cover or to a height of more than twelve (12) inches or accumulated so as to provide cover or harborage or potential cover or harborage for rodents or vermin." This appears to contradict (in some cases) the city's Chesapeake Bay Preservation Area Overlay District ordinance, which states, "Indigenous vegetation shall be preserved to the maximum extent possible consistent with the use, development or redevelopment permitted in

[12] Agricultural areas are defined as "lands of one acre or more and at least 50 feet from a public road right-of way or residential dwelling regularly and legally used for the growing of cultivated plants or the grazing of animals." Woodlands are defined as "areas of one acre or more and at least 50 feet from a public road right-of-way or residential dwelling and covered by living trees at a density of at least 250 trees per acre."

DRAFT

accordance with the "Virginia Erosion and Sediment Control Handbook," 1988, as amended and in accordance with the requirements of Chapter 45 of the City Code."[13]

One option which the city could consider is to exempt certain areas, such as Chesapeake Bay Resource Protection Areas or tidal wetlands from the nuisance ordinance's provisions pertaining to vegetable matter. Another option would be to allow exemptions from the nuisance restrictions for gardens or plantings with an approved design and maintenance agreement between the property owner and the city. Approved designs and maintenance agreements can be used to control the appearance of buffers. A third option would be to exclude approved stormwater best management practices from the definition of "vegetable matter."

Proposed New Subsections to Section 27

Option 1: Sec. 27-4 – Exemptions of Areas from Enforcement for Vegetable Matter

(a) Areas designated as tidal wetlands or Chesapeake Bay Preservation Resource Protection Areas shall be exempt from enforcement pertaining to vegetable matter.

Option 2: Sec. 27-4 – Exemptions for Approved Plantings

(a) Plantings or gardens with designs and maintenance agreements approved by the zoning administrator shall be exempt from enforcement pertaining to vegetable matter.

Option 3: Sec. 27-2 – Definitions

(c) For purposes of this article, "vegetable matter" is defined as any grass, weed, bushes, underbrush, poison ivy, poison oak or any other vegetable matter which has grown to sufficient height and cover or to a height of more than twelve (12) inches or accumulated so as to provide cover or harborage or potential cover or harborage for rodents or vermin, excluding stormwater best management practices that have been approved for use by the zoning administrator.

[13] Section 11-2.9(b) of Norfolk's Zoning Ordinance

DRAFT

MODELING DEVELOPMENT IMPACTS FOR USE IN COMPREHENSIVE PLANNING

In the first year of the Section 309 grant, several GIS-based models, tools, and methodology were evaluated in order to find a best fit for modeling potential land and water quality impacts on development in suburban and urban areas. The methodology that was chosen as a result of this review was the CommunityViz extension for Esri's ArcGIS software which was modified to evaluate pollutant loads using the Virginia Runoff Reduction Method (VRRM) spreadsheet.

The second year of the 309 grant focused on modeling site design scenarios for Suffolk and Norfolk. In Suffolk, an existing traditional subdivision was reimagined as a cluster subdivision in order to compare stormwater runoff amounts based on subdivision design. In Norfolk, a parcel already under redevelopment was modeled to compare stormwater runoff between the existing and proposed site plans.

For the current grant year, CommunityViz was used to explore other examples of ways to model development impacts for use in the comprehensive planning process or code and ordinance changes for both urban and suburban localities. A minimum parking requirements analysis was chosen for the urban locality of Norfolk and a transfer of development rights analysis was completed for the suburban locality of Suffolk.

MINIMUM PARKING REQUIREMENTS ANALYSIS

A locality's minimum requirements for the size and number of parking spaces directly affect water quality because of the amount impervious surface cover required for parking lots. The City of Norfolk recently updated its parking ordinance and so a model was developed to compare the previous minimum parking requirements with the newly adopted parking requirements.

The model was run using building footprints selected from four different zoning classes:

- Multi-Family Residential
- Office
- Commercial
- Industrial

The new minimum parking requirements in Norfolk are also dependent upon the character district in which the property falls (Figure 1).

DRAFT

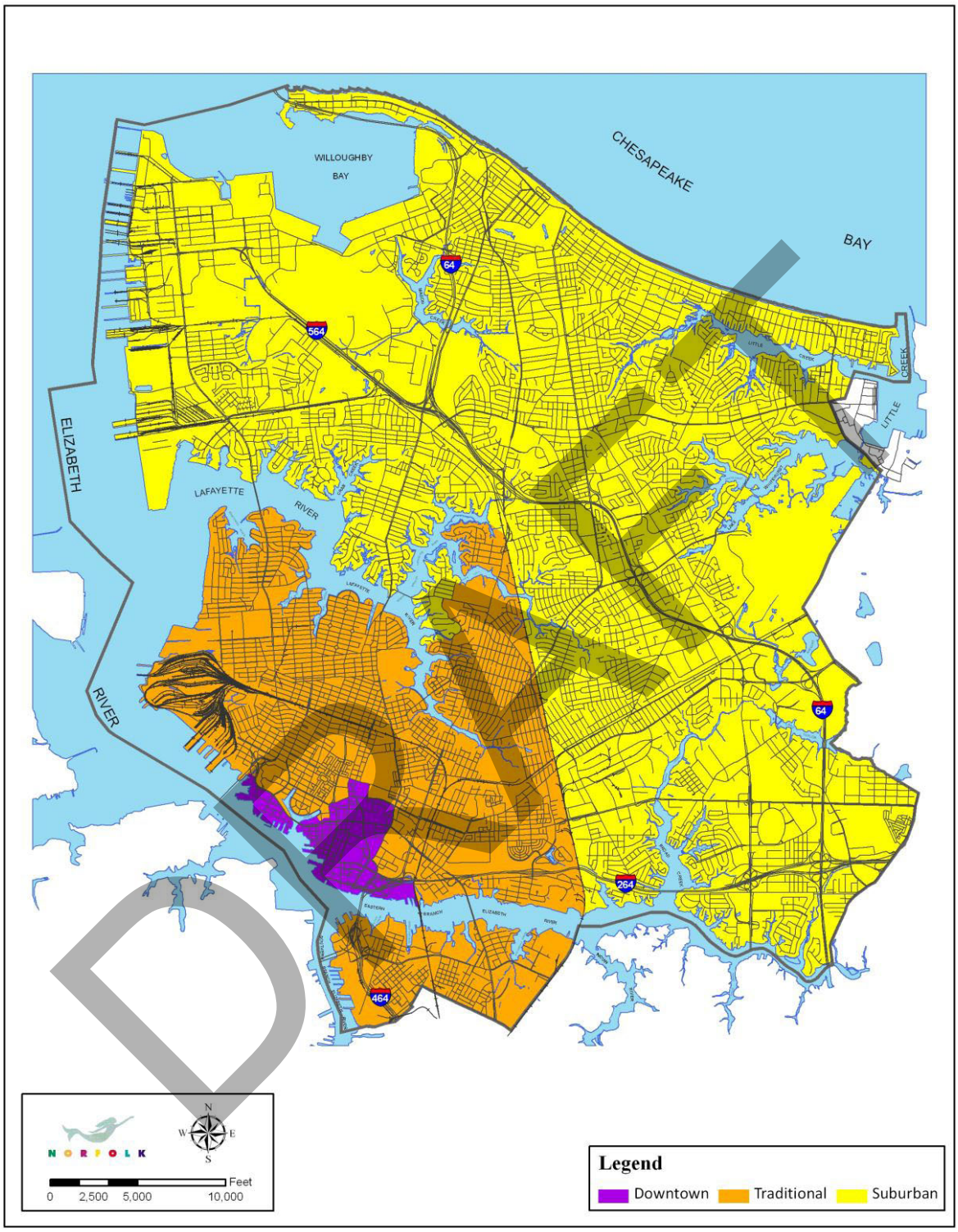

Figure 1: Character Districts in Norfolk[14]

[14]City of Norfolk, Virginia, "plaNorfolk2030," adopted March 26, 2013, p. 2-14

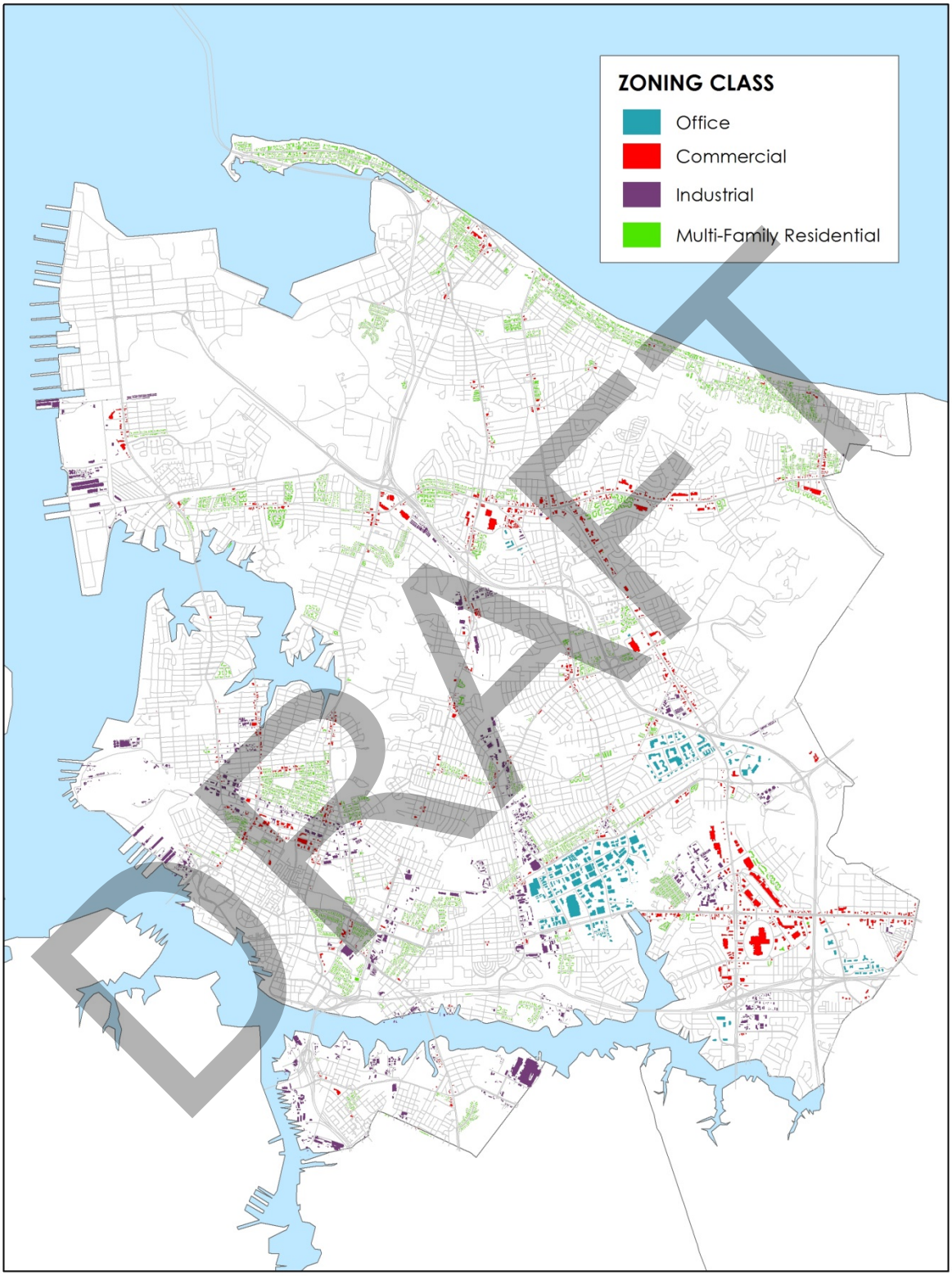

Figure 2: Buildings by selected zoning classes in Norfolk

MODEL SETUP

The model was run in CommunityViz using buildings as the base geography. The model assumes a hypothetical case whereby all the parking lots in the city are rebuilt to the new standards. It would be very difficult to model the entire city as it exists because the number of existing spaces for every parking lot is not known.

The residential and non-residential zoning classes require slightly different inputs because of the way the parking requirements are calculated.

Non-Residential buildings:

- Gross floor area
- Character district

Multi-Family Residential buildings:

- Allowed density
- Parcel size
- Character districts

Parking Requirement Variables:

- Stall Size
- Number of spaces

The different assumptions for the previous and current minimum parking requirements are input into the model through the "assumptions" panel. Figure 3 is an example of the sliding input dialog box that can be used to control the variables being tested in the model.

DRAFT

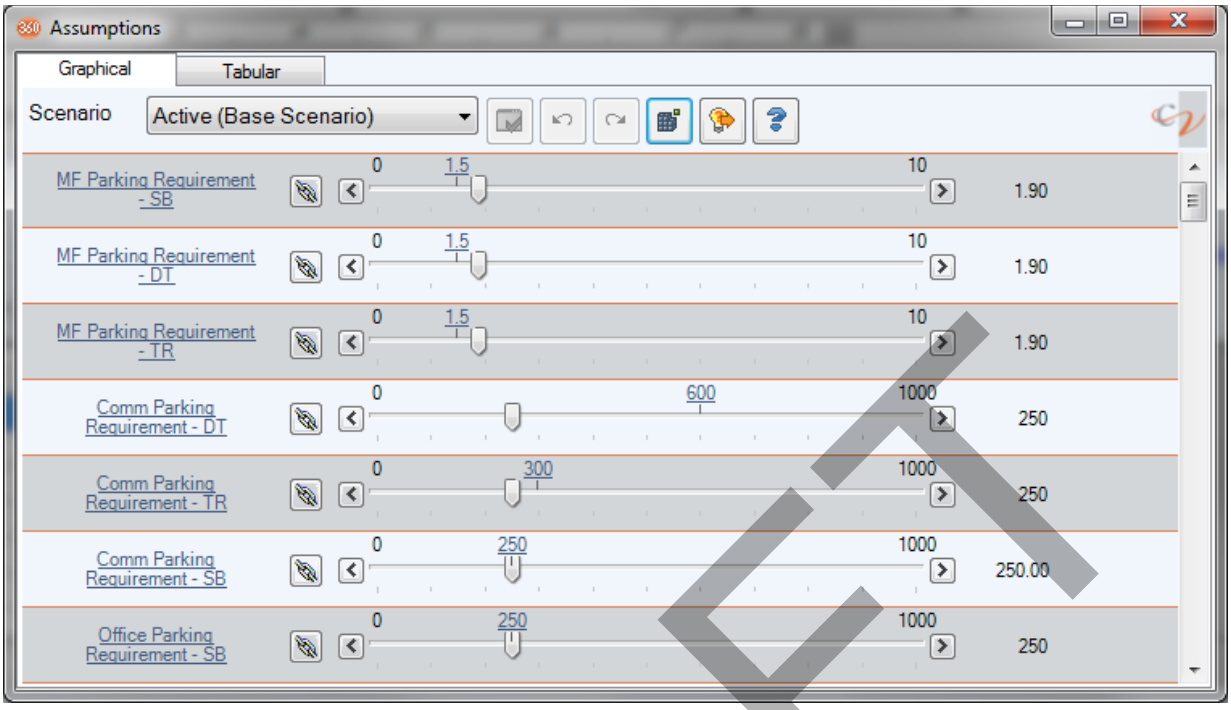

Figure 3: Parking requirements model assumptions

The assumptions are then used to calculate the final results. Examples of the equations used are below:

To calculate the total number of parking spaces for select multi-family zoning districts using the previous minimum parking requirements:

```
IfThenElse ( If ( [ Attribute:zone ] = "R-11" Or [ Attribute:zone ] = "R-12" Or [ Attribute:zone ] = "R-13" And [ Attribute:character ] = "Suburban" ), Then ( [ Assumption:MF Dwelling Units - SB ] * [ Assumption:MF Parking Requirement - SB ] ), If ( [ Attribute:zone ] = "R-11" Or [ Attribute:zone ] = "R-12" Or [ Attribute:zone ] = "R-13" And [ Attribute:character ] = "Traditional" ), Then ( [ Assumption:MF Dwelling Units - TR ] + [ Assumption:MF Parking Requirement - TR ] ), If ( [ Attribute:zone ] = "R-11" Or [ Attribute:zone ] = "R-12" Or [ Attribute:zone ] = "R-13" And [ Attribute:character ] = "Downtown" ), Then ( [ Assumption:MF Dwelling Units - DT ] + [ Assumption:MF Parking Requirement - DT ] ), Else ( 0 ) )
```

DRAFT

To calculate the total number of parking spaces for select commercial zoning districts using the previous minimum parking requirements:

```
IfThenElse ( If ( [ Attribute:zone ] = "C-1" Or [ Attribute:ZONE ] = "C-2" Or [ Attribute:ZONE ] = "C-3" Or [ Attribute:ZONE ] = "C-4" And [ Attribute:character ] = "Suburban" ), Then ( [ Attribute:GFA ] / [ Assumption:Comm Parking Requirement - SB ] ), If ( [ Attribute:zone ] = "C-1" Or [ Attribute:ZONE ] = "C-2" Or [ Attribute:ZONE ] = "C-3" Or [ Attribute:ZONE ] = "C-4" And [ Attribute:character ] = "Transitional" ), Then ( [ Attribute:GFA ] / [ Assumption:Comm Parking Requirement - TR ] ), If ( [ Attribute:zone ] = "C-1" Or [ Attribute:ZONE ] = "C-2" Or [ Attribute:ZONE ] = "C-3" Or [ Attribute:ZONE ] = "C-4" And [ Attribute:character ] = "Downtown" ), Then ( [ Attribute:GFA ] / [ Assumption:Comm Parking Requirement - DT ] ), Else ( 0 ) )
```

To calculate the total area of parking spaces for select mulit-family zoning districts using the previous minimum parking requirements:

```
( [ Attribute:TotalSpacesRes ] ) * ( [ Assumption:Stall Length ] * [ Assumption:Stall Width ] )
```

To calculate the total area of parking spaces for select commercial zoning districts using the previous minimum parking requirements:

```
( [ Attribute:TotalSpacesComm ] ) * ( [ Assumption:Stall Length ] * [ Assumption:Stall Width ] )
```

DRAFT

The scenarios are summarized in Figure 4.

Zoning	Previous Requirements DU = Dwelling Units	New Requirements DU = Dwelling Units
Multi-Family	1.5 spaces/DU plus 2 spaces every 5 units (1.9)	DT: 1.5 spaces/DU TR: 1.6 spaces/DU SB: 1.75 spaces/DU
Commercial	1 space/250 sq. ft	DT: 1 space/600 sq. ft TR: 1 space/300 sq. ft SB: 1 space/250 sq. ft
Office	1 space/250 sq. ft	DT: 1 space/600 sq. ft TR: 1 space/300 sq. ft SB: 1 space/250 sq. ft
Industrial	1 space/250 sq. ft	DT: 1 space/850 sq. ft TR: 1 space/850 sq. ft SB: 1 space/850 sq. ft
Parking Stall Size		
Standard 90 degrees	9 x 19 feet	8 x 18 feet

DT = Downtown
TR = Traditional
SB = Suburban

Figure 4: Minimum Parking Requirements Model Scenarios

DRAFT

RESULTS

The results of the analysis show for our hypothetical case that while the actual number of parking spaces would not decrease very much (0.16%), the total area covered by the parking spaces would be reduced by nearly 16%.

Indicator	Previous Requirements	New Requirements	Difference	% change
Total Parking Spaces	882,588	881,115	-1,473	- 0.16%
Total Parking Area (acres)	3,465	2,913	-552	- 15.9%

Figure 5: Summarized results of minimum parking requirements analysis

Figure 6: Graphs of change in parking area by zoning district

DRAFT

TRANSFER OF DEVELOPMENT RIGHTS ANALYSIS

Transfer of development rights (TDR) is a common planning tool used by localities to encourage development in growth areas or infill areas while discouraging development in more rural areas. The objective for this analysis was to model Suffolk's existing TDR program as it currently exists to estimate the development capacity of the receiving areas, estimate how many units could be transferred from the sending areas to the receiving areas, as well as look at alternative scenarios in defining the sending areas. This was accomplished using the build-out analysis tool within CommunityViz.

CURRENT TDR PROGRAM

The following graphic illustrates the existing TDR program in the City of Suffolk. See Figure 7 for a map depicting these areas. Figure 7 contains a list of Suffolk's zoning codes and designations.

Sending Areas

- **A, RR, or RE zones**; and
  - The land is rated as **prime farmland** (according to USDA) and is 60 contiguous acres; or
  - The land is rated as prime farmland that is 10 to 60 contiguous acres which is adjacent to a tract that is larger than 60 acres
- Or, **critical areas** (any zone). Critical areas are defined as any land in the Resource Protection Area (RPA), 100-yr flood plain, or wetlands.
  - 50% of development potential can be transferred

Receiving Areas

- Central Business District (CBD)
- Village Center (VC)
- Planned Area Development (PD) and Traditional Neighborhood Development (TND) are also possible receiving areas but do not exist by right. These fall under conditional zoning.

DRAFT

Code	Designation
C	Conservation District
A	Agricultural District
RE	Rural Estate District
RR	Rural Residential District
RL	Residential Low Density
RLM	Residential Low-Medium Density
RM	Residential Medium Density
RC	Residential Compact
RU	Residential Urban
B-1	Neighborhood Commercial District
B-2	General Commercial District
O-I	Office-Institutional District
CP	Commerce Park
M-1	Light Industrial District
M-2	Heavy Industrial District
CBD	Central Business District
VC	Village Center District
PD	Planned Development Overlay District
TND	Traditional Neighborhood Development
F	Flood Plain Overlay District
CB	Chesapeake Bay Protection Overlay District
HC	Historic and Cultural Conservation Overlay District
SCOD	Special Corridor Overlay District
AO	Airport Overlay District
MUD	Mixed Use Development Overlay District
FFRD	Fairgrounds Revitalization and Redevelopment District
W	Wetlands District

Figure 7: City of Suffolk Zoning Codes and Designations

DRAFT

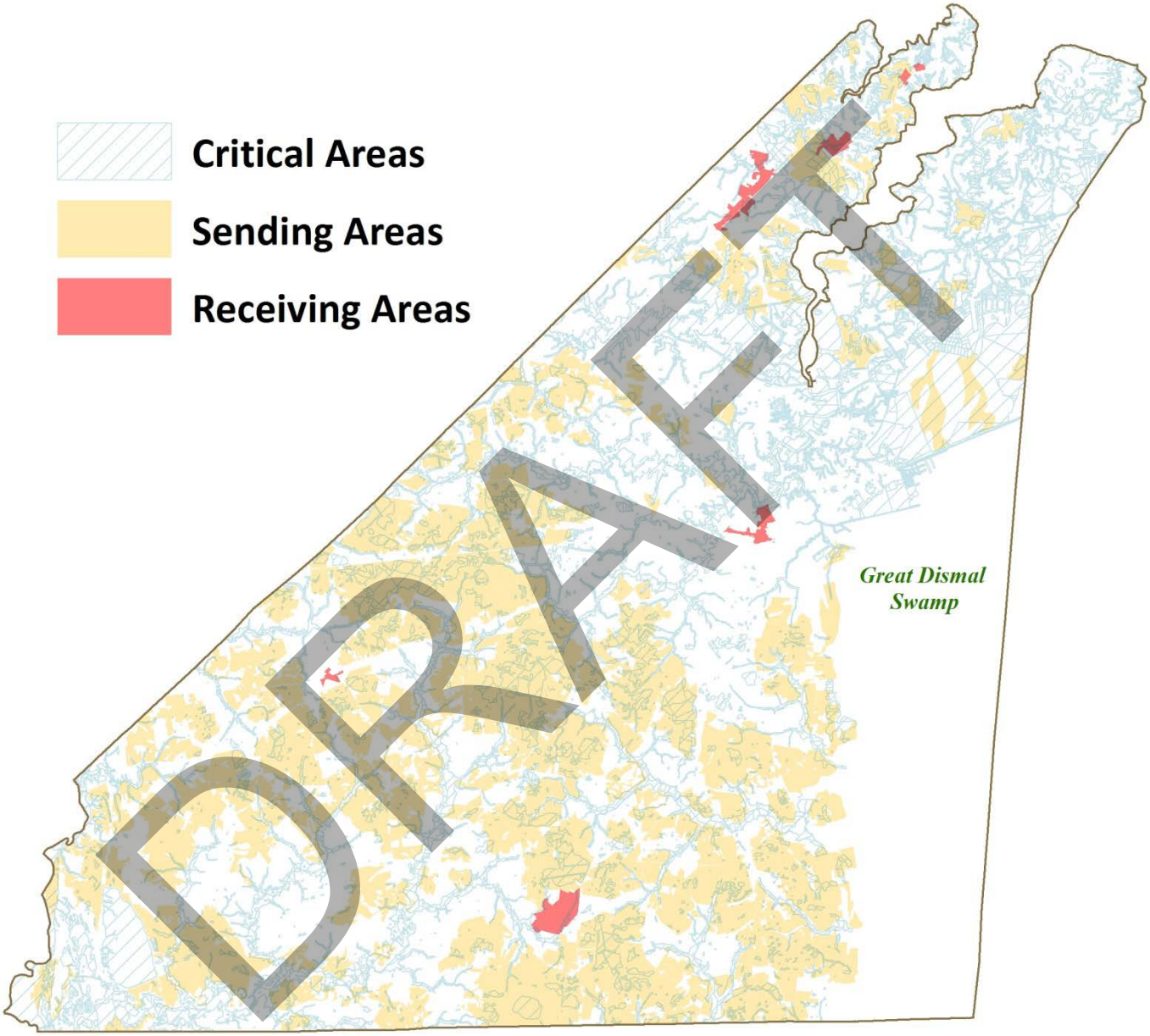

Figure 8: Existing TDR areas in Suffolk

SCENARIOS

CommunityViz has the option to run build-out scenarios purely "numerically" (density only) or "spatially" (incorporating setbacks, etc.). Since the analysis was run for the entire city and the goal was to estimate a general number of dwelling units, the numeric option was chosen for this analysis. The model also does not incorporate existing development.

The four scenarios that were modeled are listed below in Figure 8:

SCENARIO	DESCRIPTION
Base Scenario – Receiving Areas	Build-out of currently defined receiving areas
Base Scenario – Sending Areas	Build-out of currently defined sending areas
Alternative Scenario 1	Only include floodplains that are not in the RPA or wetlands and allow 100% transfer instead of 50%
Alternative Scenario 2	Remove the requirement for prime farmland, other criteria remain the same

Figure 9: TDR analysis scenarios

The maximum density for the zoning districts were obtained from the City of Suffolk's Unified Development Ordinance (UDO). CommunityViz also allows for an "efficiency" percentage which can be used to reflect common density losses such as roads or required open space. For this exercise, the model was run assuming a 20% loss of density due to roads for all zones plus the required open space preservation indicated in the UDO. Figure 9 summarizes the build-out analysis inputs. The zoning districts other than A, RR, and RE were used for the critical areas build-out where the zoning district is not restricted for sending areas.

The build-out potential of the critical areas was calculated separately, as seen in Figure 10, to illustrate the differences in the different components of the scenarios. See the maps in Figure 11 and Figure 12 for an illustration of the alternative scenarios.

RESULTS

DRAFT

This TDR analysis demonstrates that the potential development capacity of the currently defined sending areas is nearly 14 times larger than the capacity of the currently defined receiving areas. The alternative scenarios both allow for even greater number of dwelling units and therefore may not work best for Suffolk. If the TDR program begins to be used more in the future, then Suffolk may consider expanding the definition of the receiving areas to allow for more potential development. Alternatively, the City may expect that more conditional use zoning will be required, such as the village center and traditional neighborhood developments, which are currently approved for the TDR program. However, any number of TDR scenarios can be modeled with CommunityViz and this analysis was to primarily done to demonstrate the capability of the software for this particular application.

Zoning District	Maximum Density (dwelling units/acre)	Efficiency Percent
A	1	77%
RE	0.3	77%
RR	1	77%
RLM	2.9	80%
RL	1.5	75%
C	0.1	80%
RM	4.4	71%
RU	10.9	70%
RC	7.3	70%

Figure 10: TDR model inputs (see Figure 7 for zoning codes)

Scenario	Sending Areas (dwelling units)	Critical Sending Areas (dwelling units)	Total Potential Development (dwelling units)
Base Scenario – Receiving Areas	n/a	n/a	**4,669**
Base Scenario – Sending Areas	50,735	16,056	**66,791**
Alternative Scenario 1	50,735	19,351	**70,086**
Alternative Scenario 2	79,477	16,056	**95,533**

Figure 11: Results of TDR build-out analysis

DRAFT

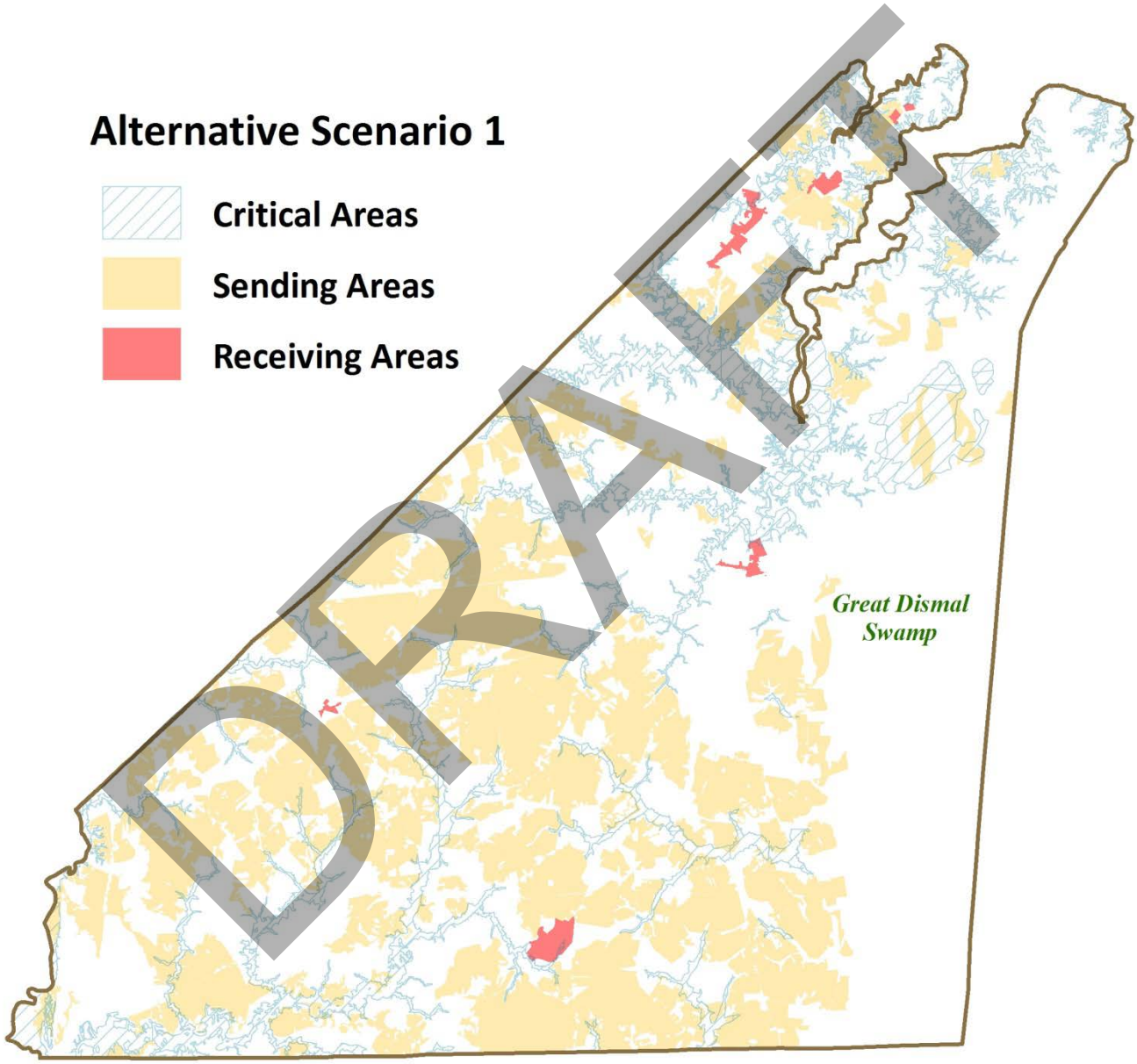

Figure 12: Alternative Scenario 1 for TDR Analysis

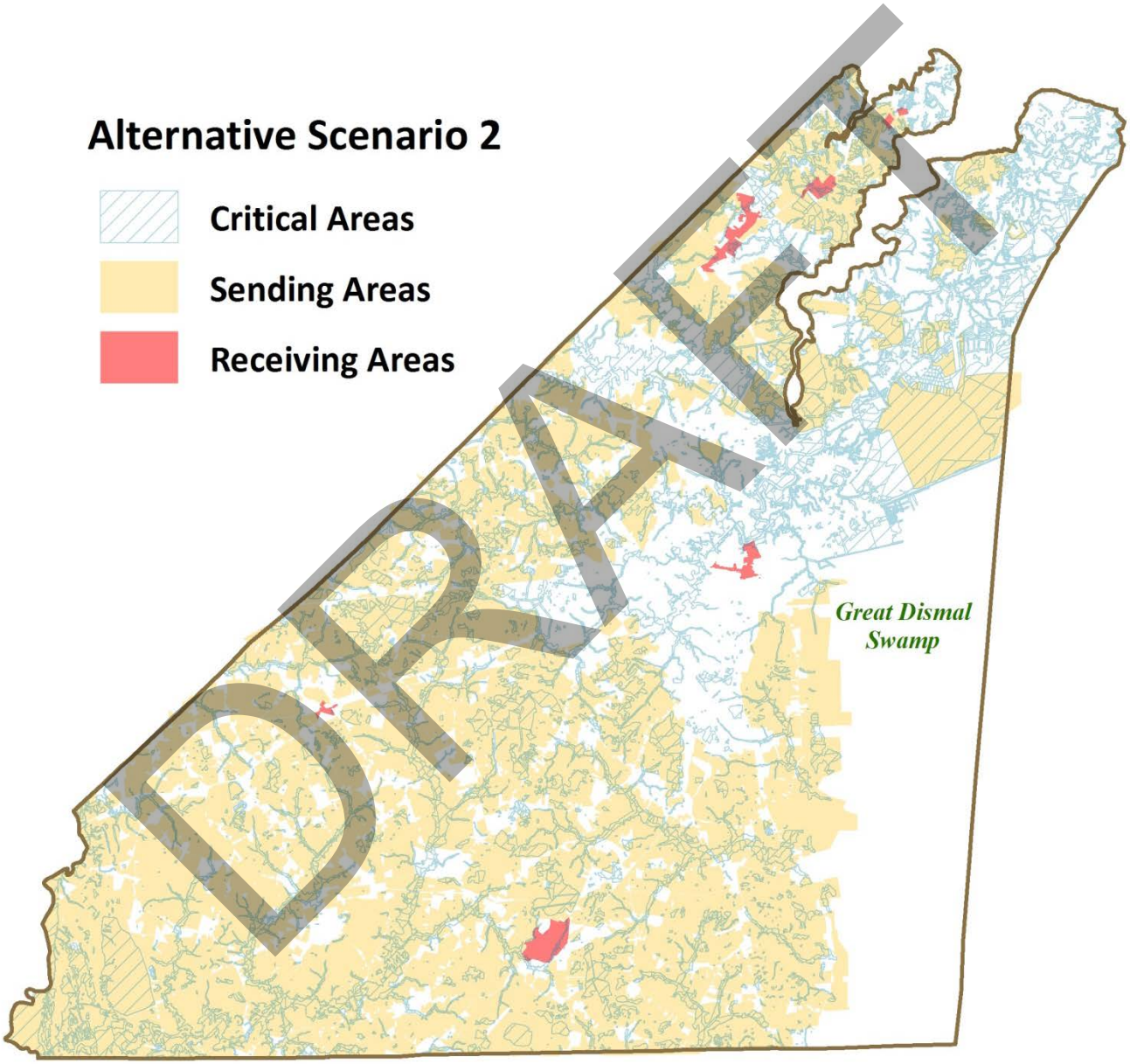

Figure 13: Alternative Scenario 2 for TDR Analysis

DISCUSSION

Both of the models discussed in this section provide examples of how CommunityViz modeling can be incorporated in to the comprehensive planning process for both urban and suburban localities. The models can be developed separately and used to evaluate an isolated policy change. Alternatively, each of these separate models, along with the techniques demonstrated in year 2 of this grant, could be combined to create a robust planning model for a locality to aid in making decisions for the comprehensive plan. For example, both the parking and TDR models could incorporate the VRRM spreadsheet calculations for stormwater in addition to any other impacts that are important to the locality.

Another way a locality can utilize CommunityViz is by using the CommunityViz module called the Land Use Designer, which makes creating a larger, integrated model easier. The Land Use Designer allows the user to simply "paint" land uses or zoning changes in the locality and calculate custom impacts (such as the number of new parking spaces or stormwater runoff) "on the fly." This is what makes CommunityViz very flexible and adaptable to any locality's particular situation.

While CommunityViz is a bit expensive and has a learning curve, it is so flexible and adaptable to practically any planning situation that investing time and funds into it should be considered. CommunityViz models benefit the locality by providing important input in the decision-making process that would be difficult to obtain elsewhere.

DRAFT

CONCLUSIONS AND NEXT STEPS

This report documents the results of the third year of a grant project from the Virginia Coastal Zone Management Project as part of its 2011-2016 Section 309 strategies for Cumulative and Second Impacts of Development. The primary goal of this work has been to identify and develop enforceable policies that local governments can implement to address the requirements of the Chesapeake Bay TMDL and Virginia Stormwater Management Regulations. The focus of the HRPDC staff in this effort has been to work with local government staff representatives from Norfolk and Suffolk to identify policies of interest to those communities, develop specific recommendations for changing local ordinances in order to implement those policies, and to demonstrate how the impacts of those changes can be modeled as part of the decision-making process.

The next step in this process is to continue working with Norfolk and Suffolk planning and public works staff to refine these recommendations and present them to senior staff and local bodies. Over the course of this three-year project both communities have made significant progress on updates to their comprehensive plans. PlaNorfolk2030 was adopted by Norfolk in March 2013, and the city has also retained a consultant to conduct a comprehensive review and revision of the city's zoning ordinance. Implementation of the comprehensive plan and the zoning ordinance updates are both ideal opportunities to incorporate some or all of the recommendations contained in this report. In addition, Norfolk has also revised its parking requirements to lower the over requirements for developments in the city's downtown and traditional urban areas. Suffolk has recently completed a complete draft of its comprehensive plan update, which will eventually lead to discussions about changes to ordinances to implement its recommendations. This will be another opportunity to take advantage of this project. Both cities will also be updating their floodplain management ordinances to comply with new requirements and flood insurance rate maps issued by the Federal Emergency Management Agency. Some of the recommendations from this report have the additional benefits of contributing to effective floodplain management, so that will be another opportunity for this work to be considered.

DRAFT

APPENDIX A – LOCAL CODE ASSESSMENTS

These assessments were conducted using the Center for Watershed Protection's Codes and Ordinance Worksheet to identify potential code amendments for Norfolk and Suffolk. The worksheet is available online at:

http://cwp.org/online-watershed-library/doc_download/477-tool-4-from-managing-stormwater-in-your-community

DRAFT

Norfolk

Development Feature	Your Local Criteria

1. Street Width

What is the minimum pavement width allowed for streets in low density residential developments that have less than 500 daily trips (ADT)? 50 feet

*If your answer is between **18-22 feet**, give yourself **4** points* ☞ 0

At higher densities are parking lanes allowed to also serve as traffic lanes (i.e., queuing streets)? YES/NO

*If your answer is **YES**, give yourself **3** points* ☞ 0

Notes on Street Width (include source documentation such as name of document, section and page #):

Code of Ordinances Sec. 42.5-7

2. Street Length

Do street standards promote the most efficient street layouts that reduce overall street length? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Notes on Street Length (include source documentation such as name of document, section and page #):

Sec 42.5-7

3. Right-of-Way Width

What is the minimum right of way (ROW) width for a residential street? 50 feet

*If your answer is **less than 45 feet**, give yourself **3** points* ☞ 0

Does the code allow utilities to be placed under the paved section of the ROW? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Notes on ROW Width (include source documentation such as name of document, section and page #):

Sec 42.5-7; Sec 42, Article II, Division 1

4. Cul-de-Sacs

What is the minimum radius allowed for cul-de-sacs? 40 feet

*If your answer is **less than 35 feet**, give yourself **3** points* ☞

*If your answer is **36 feet to 45 feet**, give yourself **1** point* ☞ 1

Can a landscaped island be created within the cul-de-sac? YES/NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Are alternative turnarounds such as "hammerheads" allowed on short streets in low density residential developments? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Notes on Cul-de-Sacs (include source documentation such as name of document, section and page #):

Sec 42.5-7

Code and Ordinance Worksheet *Subtotal Page 5* 4

DRAFT

Development Feature	Your Local Criteria

5. Vegetated Open Channels

Are curb and gutters required for most residential street sections? YES/ NO

*If your answer is **NO**, give yourself **2** points* ☞ 0

Are there established design criteria for swales that can provide stormwater quality treatment (i.e., dry swales, biofilters, or grass swales)? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

Notes on Vegetated Open Channel (include source documentation such as name of document, section and page #):

Code Sec 42.5-8 ; Virginia Stormwater Design Specifications

6. Parking Ratios

What is the minimum parking ratio for a professional office building (per 1000 ft^2 of gross floor area)? 4 spaces

*If your answer is **less than 3.0 spaces**, give yourself **1** point* ☞ 0

What is the minimum required parking ratio for shopping centers (per 1,000 ft^2 gross floor area)? 4 or 5 spaces

*If your answer is **4.5 spaces or less**, give yourself **1** point* ☞ 0.5

What is the minimum required parking ratio for single family homes (per home)? 2 spaces

*If your answer is **less than or equal to 2.0 spaces**, give yourself **1** point* ☞ 1

Are your parking requirements set as maximum or median (rather than minimum) requirements? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Notes on Parking Ratios (include source documentation such as name of document, section and page #):

Zoning Ordinance ~~15-6.2~~ 15-5.2

7. Parking Codes

Is the use of shared parking arrangements promoted? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Are model shared parking agreements provided? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Are parking ratios reduced if shared parking arrangements are in place? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

If mass transit is provided nearby, is the parking ratio reduced? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Notes on Parking Codes (include source documentation such as name of document, section and page #):

Zoning 15-5.1 (j)

Code and Ordinance Worksheet — *Subtotal Page 6* 5.5

DRAFT

8. Parking Lots

What is the minimum stall width for a standard parking space? 8 feet

*If your answer is **9 feet or less**, give yourself **1** point* ☞ 1

What is the minimum stall length for a standard parking space? 19 feet

*If your answer is **18 feet or less**, give yourself **1** point* ☞ 0

Are at least 30% of the spaces at larger commercial parking lots required to have smaller dimensions for compact cars? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Can pervious materials be used for spillover parking areas? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Notes on Parking Lots (include source documentation such as name of document, section and page #):

Zoning 15-5.1(g)

9. Structured Parking

Are there any incentives to developers to provide parking within garages rather than surface parking lots? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Notes on Structured Parking (include source documentation such as name of document, section and page #):

10. Parking Lot Runoff

Is a minimum percentage of a parking lot required to be landscaped? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

Is the use of bioretention islands and other stormwater practices within landscaped areas or setbacks allowed? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Notes on Parking Lot Runoff (include source documentation such as name of document, section and page #):

Zoning 17-5.1

Code and Ordinance Worksheet — *Subtotal Page 7* 3

DRAFT

Time to Assess: Principles 1 - 10 focused on the codes, ordinances, and standards that determine the size, shape, and construction of parking lots, roadways, and driveways in the suburban landscape. There were a total of **40** points available for Principles 1 - 10. What was your total score?

Subtotal Page 5 4 + Subtotal Page 6 5.5 + Subtotal Page 7 3 = 12.5

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

_____

_____

_____

_____

11. Open Space Design

Are open space or cluster development designs allowed in the community? YES/ NO

*If your answer is **YES**, give yourself **3** points* ☞

*If your answer is **NO**, skip to question No. 12*

Is land conservation or impervious cover reduction a major goal or objective of the open space design ordinance? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞

Are the submittal or review requirements for open space design greater than those for conventional development? YES/ NO

*If your answer is **NO**, give yourself **1** point* ☞

Is open space or cluster design a by-right form of development? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞

Are flexible site design criteria available for developers that utilize open space or cluster design options (e.g., setbacks, road widths, lot sizes) YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞

Notes on Open Space Design (include source documentation such as name of document, section and page #):

Code and Ordinance Worksheet *Subtotal Page 8* 0

DRAFT

Norfolk

Development Feature	Your Local Criteria

12. Setbacks and Frontages

Are irregular lot shapes (e.g., pie-shaped, flag lots) allowed in the community?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1
What is the minimum requirement for front setbacks for a one half (½) acre residential lot?	25 feet
*If your answer is **20 feet or less**, give yourself **1** point* ☞	0
What is the minimum requirement for rear setbacks for a one half (½) acre residential lot?	25 feet
*If your answer is **25 feet or less**, give yourself **1** point* ☞	1
What is the minimum requirement for side setbacks for a one half (½) acre residential lot?	10 feet
*If your answer is **8 feet or less**, give yourself **1** points* ☞	0
What is the minimum frontage distance for a one half (½) acre residential lot?	100 feet
*If your answer is **less than 80 feet**, give yourself **2** points* ☞	0

Notes on Setback and Frontages (include source documentation such as name of document, section and page #):

Zoning Chapter 4

13. Sidewalks

What is the minimum sidewalk width allowed in the community?	5 feet
*If your answer is **4 feet or less**, give yourself **2** points* ☞	0
Are sidewalks always required on both sides of residential streets?	YES/ NO
*If your answer is **NO**, give yourself **2** points* ☞	0
Are sidewalks generally sloped so they drain to the front yard rather than the street?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	0
Can alternate pedestrian networks be substituted for sidewalks (e.g., trails through common areas)?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	0

Notes on Sidewalks (include source documentation such as name of document, section and page #):

Norfolk City Design Standards

14. Driveways

What is the minimum driveway width specified in the community?	_____ feet
*If your answer is **9 feet or less (one lane) or 18 feet (two lanes)**, give yourself **2** points* ☞ No min, max is 10' : Zoning 15-5.1 (i)	2

Code and Ordinance Worksheet — *Subtotal Page 9* 4

DRAFT

Development Feature	Your Local Criteria
Can pervious materials be used for single family home driveways (e.g., grass, gravel, porous pavers, etc)?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Can a "two track" design be used at single family driveways?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1
Are shared driveways permitted in residential developments?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1

Notes on Driveways (include source documentation such as name of document, section and page #):

Zoning 15-5.1 (m); (i)

15. Open Space Management

Skip to question 16 if open space, cluster, or conservation developments are not allowed in your community.

Does the community have enforceable requirements to establish associations that can effectively manage open space?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	
Are open space areas required to be consolidated into larger units?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	
Does a minimum percentage of open space have to be managed in a natural condition?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	
Are allowable and unallowable uses for open space in residential developments defined?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	
Can open space be managed by a third party using land trusts or conservation easements?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	

Notes on Open Space Management (include source documentation such as name of document, section and page #):

16. Rooftop Runoff

Can rooftop runoff be discharged to yard areas?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Do current grading or drainage requirements allow for temporary ponding of stormwater on front yards or rooftops?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	0

Notes on Rooftop Runoff (include source documentation such as name of document, section and page #):

Virginia Stormwater Design Specifications

Code and Ordinance Worksheet *Subtotal Page 10* 6

DRAFT

Time to Assess: Principles 11 through 16 focused on the regulations which determine lot size, lot shape, housing density, and the overall design and appearance of our neighborhoods. There were a total of **36** points available for Principles 11 - 16. What was your total score?

Subtotal Page 8 0 + Subtotal Page 9 4 + Subtotal Page 10 6 = 10

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

_____

_____

_____

_____

_____

17. Buffer Systems

Is there a stream buffer ordinance in the community? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

If so, what is the minimum buffer width? 100 feet

*If your answer is **75 feet or more**, give yourself **1** point* ☞ 1

Is expansion of the buffer to include freshwater wetlands, steep slopes or the 100-year floodplain required? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Notes on Buffer Systems (include source documentation such as name of document, section and page #):

Zoning 11-2

18. Buffer Maintenance

If you do not have stream buffer requirements in your community, skip to question No. 19

Does the stream buffer ordinance specify that at least part of the stream buffer be maintained with native vegetation? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Does the stream buffer ordinance outline allowable uses? YES/ NO

*If your answer is **YES**, give yourself **1** point* 1

Zoning 11-2

Code and Ordinance Worksheet *Subtotal Page 11* 4

DRAFT

Development Feature	Your Local Criteria
Does the ordinance specify enforcement and education mechanisms?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1

Notes on Buffer Systems (include source documentation such as name of document, section and page #):

Code Sec 15-1, 15-6

19. Clearing and Grading

Is there any ordinance that requires or encourages the preservation of natural vegetation at residential development sites?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Do reserve septic field areas need to be cleared of trees at the time of development?	YES/ NO
*If your answer is **NO**, give yourself **1** point* ☞	0

Notes on Buffer Maintenance (include source documentation such as name of document, section and page #):

Code Sec 45-12 ; 12 VAC5-610-700

20. Tree Conservation

If forests or specimen trees are present at residential development sites, does some of the stand have to be preserved?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Are the limits of disturbance shown on construction plans adequate for preventing clearing of natural vegetative cover during construction?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	0

Notes on Tree Conservation (include source documentation such as name of document, section and page #):

Zoning 17-13.1

21. Land Conservation Incentives

Are there any incentives to developers or landowners to conserve non-regulated land (open space design, density bonuses, stormwater credits or lower property tax rates)?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	0
Is flexibility to meet regulatory or conservation restrictions (density compensation, buffer averaging, transferable development rights, off-site mitigation) offered to developers?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	0

Notes on Land Cons. Incentives (include source documentation such as name of document, section and page #):

Code and Ordinance Worksheet *Subtotal Page 12* 5

DRAFT

Development Feature	Your Local Criteria

22. Stormwater Outfalls

Is stormwater required to be treated for quality before it is discharged?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	0
Are there effective design criteria for stormwater best management practices (BMPs)?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1
Can stormwater be directly discharges into a jurisdictional wetland without pretreatment?	YES/ NO
*If your answer is **NO**, give yourself **1** point* ☞	0
Does a floodplain management ordinance that restricts or prohibits development within the 100-year floodplain exist?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2

Notes on Stormwater Outfalls (include source documentation such as name of document, section and page #):
Virginia Stormwater Design Specifications; Zoning 11-3

Code and Ordinance Worksheet *Subtotal Page 13* 3

Time to Assess: Principles 17 through 22 addressed the codes and ordinances that promote (or impede) protection of existing natural areas and incorporation of open spaces into new development. There were a total of 24 points available for Principles 17 - 22. What was your total score?

Subtotal Page 11 4 + Subtotal Page 12 5 + Subtotal Page 13 3 = 12

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

To determine final score, add up subtotal from each **Time to Assess**

Principles 1 - 10 (Page 8)	12.5
Principles 11 - 16 (Page 11)	10
Principles 17 - 22 (Page 13)	12
TOTAL	34.5

DRAFT

Suffolk

Development Feature	Your Local Criteria

1. Street Width

What is the minimum pavement width allowed for streets in low density residential developments that have less than 500 daily trips (ADT)? 28 feet

*If your answer is between **18-22 feet**, give yourself **4** points* ☞ 0

At higher densities are parking lanes allowed to also serve as traffic lanes (i.e., queuing streets)? YES/NO

*If your answer is **YES**, give yourself **3** points* ☞ 0

Notes on Street Width (include source documentation such as name of document, section and page #):

UDO Sec 31-612

2. Street Length

Do street standards promote the most efficient street layouts that reduce overall street length? YES/NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Notes on Street Length (include source documentation such as name of document, section and page #):

UDO Sec 31-612

3. Right-of-Way Width

What is the minimum right of way (ROW) width for a residential street? 40 feet

*If your answer is **less than 45 feet**, give yourself **3** points* ☞ 3

Does the code allow utilities to be placed under the paved section of the ROW? YES/NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Notes on ROW Width (include source documentation such as name of document, section and page #):

UDO Sec 31-612 ; PFM pg 2-16

4. Cul-de-Sacs

What is the minimum radius allowed for cul-de-sacs? 45 feet

*If your answer is **less than 35 feet**, give yourself **3** points* ☞

*If your answer is **36 feet to 45 feet**, give yourself **1** point* ☞ 1

Can a landscaped island be created within the cul-de-sac? YES/NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Are alternative turnarounds such as "hammerheads" allowed on short streets in low density residential developments? YES/NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Notes on Cul-de-Sacs (include source documentation such as name of document, section and page #):

UDO Sec 31-612

Code and Ordinance Worksheet *Subtotal Page 5* 7

DRAFT

Development Feature	Your Local Criteria

5. Vegetated Open Channels

Are curb and gutters required for most residential street sections? YES/ NO

*If your answer is **NO**, give yourself **2** points* ☞ [0]

Are there established design criteria for swales that can provide stormwater quality treatment (i.e., dry swales, biofilters, or grass swales)? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ [2]

Notes on Vegetated Open Channel (include source documentation such as name of document, section and page #):

UDO Sec 31-612 ; Virginia Stormwater Design Specifications

6. Parking Ratios

What is the minimum parking ratio for a professional office building (per 1000 ft^2 of gross floor area)? 4 spaces

*If your answer is **less than 3.0 spaces**, give yourself **1** point* ☞ [0]

What is the minimum required parking ratio for shopping centers (per 1,000 ft^2 gross floor area)? 1 spaces

*If your answer is **4.5 spaces or less**, give yourself **1** point* ☞ [1]

What is the minimum required parking ratio for single family homes (per home)? 2 spaces

*If your answer is **less than or equal to 2.0 spaces**, give yourself **1** point* ☞ [1]

Are your parking requirements set as maximum or median (rather than minimum) requirements? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ [2]

Notes on Parking Ratios (include source documentation such as name of document, section and page #):

UDO Sec 31-606

7. Parking Codes

Is the use of shared parking arrangements promoted? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ [1]

Are model shared parking agreements provided? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ [0]

Are parking ratios reduced if shared parking arrangements are in place? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ [1]

If mass transit is provided nearby, is the parking ratio reduced? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ [0]

Notes on Parking Codes (include source documentation such as name of document, section and page #):

UDO Sec. 31-606 (4)

Code and Ordinance Worksheet — *Subtotal Page 6* [8]

DRAFT

Development Feature	Your Local Criteria

8. Parking Lots

What is the minimum stall width for a standard parking space? 9 feet

*If your answer is **9 feet or less**, give yourself **1** point* ☞ 1

What is the minimum stall length for a standard parking space? 18 feet

*If your answer is **18 feet or less**, give yourself **1** point* ☞ 1

Are at least 30% of the spaces at larger commercial parking lots required to have smaller dimensions for compact cars? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Can pervious materials be used for spillover parking areas? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Notes on Parking Lots (include source documentation such as name of document, section and page #):

UDO Sec. 31-606 (9)

9. Structured Parking

Are there any incentives to developers to provide parking within garages rather than surface parking lots? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Notes on Structured Parking (include source documentation such as name of document, section and page #):

10. Parking Lot Runoff

Is a minimum percentage of a parking lot required to be landscaped? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

Is the use of bioretention islands and other stormwater practices within landscaped areas or setbacks allowed? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Notes on Parking Lot Runoff (include source documentation such as name of document, section and page #):

UDO Sec. 31-603

Code and Ordinance Worksheet *Subtotal Page 7* 4

DRAFT

Development Feature	Your Local Criteria

Time to Assess: Principles 1 - 10 focused on the codes, ordinances, and standards that determine the size, shape, and construction of parking lots, roadways, and driveways in the suburban landscape. There were a total of **40** points available for Principles 1 - 10. What was your total score?

Subtotal Page 5 7 + Subtotal Page 6 8 + Subtotal Page 7 4 = 19

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

_____

_____

_____

_____

11. Open Space Design

Are open space or cluster development designs allowed in the community? YES/ NO

*If your answer is **YES**, give yourself **3** points* ☞ 3

*If your answer is **NO**, skip to question No. 12*

Is land conservation or impervious cover reduction a major goal or objective of the open space design ordinance? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Are the submittal or review requirements for open space design greater than those for conventional development? YES/ NO

*If your answer is **NO**, give yourself **1** point* ☞ 0

Is open space or cluster design a by-right form of development? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Are flexible site design criteria available for developers that utilize open space or cluster design options (e.g., setbacks, road widths, lot sizes) YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

Notes on Open Space Design (include source documentation such as name of document, section and page #):

UDO Sec. 31-411(c), (e) ; Sec. 31-307 (a)(1)(c)

Code and Ordinance Worksheet *Subtotal Page 8* 7

DRAFT

Development Feature	Your Local Criteria

12. Setbacks and Frontages

Are irregular lot shapes (e.g., pie-shaped, flag lots) allowed in the community?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1
What is the minimum requirement for front setbacks for a one half (½) acre residential lot?	35 feet
*If your answer is **20 feet or less**, give yourself **1** point* ☞	0
What is the minimum requirement for rear setbacks for a one half (½) acre residential lot?	30 feet
*If your answer is **25 feet or less**, give yourself **1** point* ☞	0
What is the minimum requirement for side setbacks for a one half (½) acre residential lot?	15 feet
*If your answer is **8 feet or less**, give yourself **1** points* ☞	0
What is the minimum frontage distance for a one half (½) acre residential lot?	80 feet
*If your answer is **less than 80 feet**, give yourself **2** points* ☞	0

Notes on Setback and Frontages (include source documentation such as name of document, section and page #):

UDO Sec. 31-605, Sec. 31-407

13. Sidewalks

What is the minimum sidewalk width allowed in the community?	4 feet
*If your answer is **4 feet or less**, give yourself **2** points* ☞	2
Are sidewalks always required on both sides of residential streets?	YES/ NO
*If your answer is **NO**, give yourself **2** points* ☞	2
Are sidewalks generally sloped so they drain to the front yard rather than the street?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	0
Can alternate pedestrian networks be substituted for sidewalks (e.g., trails through common areas)?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	0

Notes on Sidewalks (include source documentation such as name of document, section and page #):

UDO Sec. 31-612

14. Driveways

What is the minimum driveway width specified in the community?	9 feet
*If your answer is **9 feet or less (one lane) or 18 feet (two lanes)**, give yourself **2** points* ☞	2

UDO Sec 31-605 (h)(1)

Code and Ordinance Worksheet — *Subtotal Page 9* 7

DRAFT

Development Feature	Your Local Criteria
Can pervious materials be used for single family home driveways (e.g., grass, gravel, porous pavers, etc)?	YES/NO
*If your answer is **YES**, give yourself **2** points* ☞	0
Can a "two track" design be used at single family driveways?	YES/NO
*If your answer is **YES**, give yourself **1** point* ☞	0
Are shared driveways permitted in residential developments?	YES/NO
*If your answer is **YES**, give yourself **1** point* ☞	0

Notes on Driveways (include source documentation such as name of document, section and page #):

15. Open Space Management

Skip to question 16 if open space, cluster, or conservation developments are not allowed in your community.

Does the community have enforceable requirements to establish associations that can effectively manage open space?	YES/NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Are open space areas required to be consolidated into larger units?	YES/NO
*If your answer is **YES**, give yourself **1** point* ☞	0
Does a minimum percentage of open space have to be managed in a natural condition?	YES/NO
*If your answer is **YES**, give yourself **1** point* ☞	0
Are allowable and unallowable uses for open space in residential developments defined?	YES/NO
*If your answer is **YES**, give yourself **1** point* ☞	1
Can open space be managed by a third party using land trusts or conservation easements?	YES/NO
*If your answer is **YES**, give yourself **1** point* ☞	1

Notes on Open Space Management (include source documentation such as name of document, section and page #):
UDO Sec. 31-607 (8)

16. Rooftop Runoff

Can rooftop runoff be discharged to yard areas?	YES/NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Do current grading or drainage requirements allow for temporary ponding of stormwater on front yards or rooftops?	YES/NO
*If your answer is **YES**, give yourself **2** points* ☞	0

Notes on Rooftop Runoff (include source documentation such as name of document, section and page #):
Virginia Stormwater Design Specifications

Code and Ordinance Worksheet *Subtotal Page 10* 6

DRAFT

Time to Assess: Principles 11 through 16 focused on the regulations which determine lot size, lot shape, housing density, and the overall design and appearance of our neighborhoods. There were a total of **36** points available for Principles 11 - 16. What was your total score?

Subtotal Page 8 7 + Subtotal Page 9 7 + Subtotal Page 10 6 = 20

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

_____

_____

_____

_____

_____

DRAFT

17. Buffer Systems

Is there a stream buffer ordinance in the community? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

If so, what is the minimum buffer width? 100 feet

*If your answer is **75 feet or more**, give yourself **1** point* ☞ 1

Is expansion of the buffer to include freshwater wetlands, steep slopes or the 100-year floodplain required? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 0

Notes on Buffer Systems (include source documentation such as name of document, section and page #):

UDO Sec. 31-415

18. Buffer Maintenance

If you do not have stream buffer requirements in your community, skip to question No. 19

Does the stream buffer ordinance specify that at least part of the stream buffer be maintained with native vegetation? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Does the stream buffer ordinance outline allowable uses? YES/ NO

*If your answer is **YES**, give yourself **1** point* 1

UDO Sec. 31-415

Code and Ordinance Worksheet *Subtotal Page 11* 4

Development Feature	Your Local Criteria
Does the ordinance specify enforcement and education mechanisms?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1

Notes on Buffer Systems (include source documentation such as name of document, section and page #):

UDO Sec. 31-415

19. Clearing and Grading

Is there any ordinance that requires or encourages the preservation of natural vegetation at residential development sites?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Do reserve septic field areas need to be cleared of trees at the time of development?	YES/ NO
*If your answer is **NO**, give yourself **1** point* ☞	0

Notes on Buffer Maintenance (include source documentation such as name of document, section and page #):

Sec. 31-603; 12VAC5-610-700

20. Tree Conservation

If forests or specimen trees are present at residential development sites, does some of the stand have to be preserved?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Are the limits of disturbance shown on construction plans adequate for preventing clearing of natural vegetative cover during construction?	YES/ NO
*If your answer is **YES**, give yourself **1** point* ☞	1

Notes on Tree Conservation (include source documentation such as name of document, section and page #):

UDO Sec. 31-603

21. Land Conservation Incentives

Are there any incentives to developers or landowners to conserve non-regulated land (open space design, density bonuses, stormwater credits or lower property tax rates)?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2
Is flexibility to meet regulatory or conservation restrictions (density compensation, buffer averaging, transferable development rights, off-site mitigation) offered to developers?	YES/ NO
*If your answer is **YES**, give yourself **2** points* ☞	2

Notes on Land Cons. Incentives (include source documentation such as name of document, section and page #):

UDO Sec 31-409(a); Sec. 31-409(b)

Code and Ordinance Worksheet — *Subtotal Page 12* 10

DRAFT

Development Feature	Your Local Criteria

22. Stormwater Outfalls

Is stormwater required to be treated for quality before it is discharged? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 0

Are there effective design criteria for stormwater best management practices (BMPs)? YES/ NO

*If your answer is **YES**, give yourself **1** point* ☞ 1

Can stormwater be directly discharges into a jurisdictional wetland without pretreatment? YES/ NO

*If your answer is **NO**, give yourself **1** point* ☞ 1

Does a floodplain management ordinance that restricts or prohibits development within the 100-year floodplain exist? YES/ NO

*If your answer is **YES**, give yourself **2** points* ☞ 2

Notes on Stormwater Outfalls (include source documentation such as name of document, section and page #):

Virginia Stormwater Design Specifications, PFM ; UDO Sec. 31-416.1

Code and Ordinance Worksheet *Subtotal Page 13* 4

Time to Assess: Principles 17 through 22 addressed the codes and ordinances that promote (or impede) protection of existing natural areas and incorporation of open spaces into new development. There were a total of 24 points available for Principles 17 - 22. What was your total score?

Subtotal Page 11 4 + Subtotal Page 12 10 + Subtotal Page 13 4 = 18

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

To determine final score, add up subtotal from each **Time to Assess**

Principles 1 - 10 (Page 8)	19
Principles 11 - 16 (Page 11)	20
Principles 17 - 22 (Page 13)	18
TOTAL	57

DRAFT

APPENDIX B – SHARED PARKING AGREEMENTS

These are examples of shared parking agreements from three communities: Portland, Oregon, Cary, North Carolina, and San Diego, California.

DRAFT

Model - Shared Use Agreement for Parking Facilities

This Shared Use Agreement for Parking Facilities, entered into this ____ day of _____, _____, between _____, hereinafter called lessor and _____, hereinafter called lessee. In consideration of the covenants herein, lessor agrees to share with lessee certain parking facilities, as is situated in the City of _____, County of _____ and State of _____, hereinafter called the facilities, described as: [Include legal description of location and spaces to be shared here, and as shown on attachment 1.]

The facilities shall be shared commencing with the ____ day of _____, _____, and ending at 11:59 PM on the ____ day of _____, _____, for [insert negotiated compensation figures, as appropriate]. [The lessee agrees to pay at [insert payment address] to lessor by the _____ day of each month [or other payment arrangements].] Lessor hereby represents that it holds legal title to the facilities

The parties agree:

1. USE OF FACILITIES
This section should describe the nature of the shared use (exclusive, joint sections, time(s) and day(s) of week of usage.
-SAMPLE CLAUSE-*[Lessee shall have exclusive use of the facilities. The use shall only be between the hours of 5:30 PM Friday through 5:30 AM Monday and between the hours of 5:30 PM and 5:30 AM Monday through Thursday.]*

2. MAINTENANCE
This section should describe responsibility for aspects of maintenance of the facilities. This could include cleaning, striping, seal coating, asphalt repair and more.
-SAMPLE CLAUSE-*[Lessor shall provide, as reasonably necessary asphalt repair work. Lessee and Lessor agree to share striping, seal coating and lot sweeping at a 50%/50% split based upon mutually accepted maintenance contracts with outside vendors. Lessor shall maintain lot and landscaping at or above the current condition, at no additional cost to the lessee.]*

3. UTILITIES and TAXES
This section should describe responsibility for utilities and taxes. This could include electrical, water, sewage, and more.
-SAMPLE CLAUSE-*[Lessor shall pay all taxes and utilities associated with the facilities, including maintenance of existing facility lighting as directed by standard safety practices.]*

4. SIGNAGE
This section should describe signage allowances and restrictions.
-SAMPLE CLAUSE-
[Lessee may provide signage, meeting with the written approval of lessor, designating usage allowances.]

DRAFT

5. ENFORCEMENT
This section should describe any facility usage enforcement methods.
-SAMPLE CLAUSE-*[Lessee may provide a surveillance officer(s) for parking safety and usage only for the period of its exclusive use. Lessee and lessor reserve the right to tow, at owners expense, vehicles improperly parked or abandoned. All towing shall be with the*
approval of the lessor.]

6. COOPERATION
This section should describe communication relationship.
-SAMPLE CLAUSE-*[Lessor and lessee agree to cooperate to the best of their abilities to mutually use the facilities without disrupting the other party. The parties agree to meet on occasion to work out any problems that may arise to the shared use.]*

7. INSURANCE
This section should describe insurance requirements for the facilities.
-SAMPLE CLAUSE-*[At their own expense, lessor and lessee agree to maintain liability insurance for the facilities as is standard for their own business usage.]*

8. INDEMNIFICATION
This section should describe indemnification as applicable and negotiated. This is a very technical section and legal counsel should be consulted for appropriate language to each and every agreement.
-NO SAMPLE CLAUSE PROVIDED-

9. TERMINATION
This section should describe how to or if this agreement can be terminated and post termination responsibilities.
-SAMPLE CLAUSE-*[If lessor transfers ownership, or if part of all of the facilities are condemned, or access to the facilities is changed or limited, lessee may, in its sole discretion terminate this agreement without further liability by giving Lessor not less than 60 days prior written notice. Upon termination of this agreement, Lessee agrees to remove all signage and repair damage due to excessive use or abuse. Lessor agrees to give lessee the right of first refusal on subsequent renewal of this agreement.]*

10. SUPPLEMENTAL COVENANTS
This section should contain any additional covenants, rights, responsibilities and/or agreements.
-NO SAMPLE CLAUSE PROVIDED-

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date Set forth at the outset hereof.

[Signature and notarization as appropriate to a legal document and as appropriate to recording process negotiated between parties.]

DRAFT

Please return to: Administrative Staff, Cary Planning Department, P.O. Box 2008, Cary, NC 27512-8005

STATE OF NORTH CAROLINA
COUNTY OF WAKE

SAMPLE
Shared Parking Agreement

This Shared Parking Agreement ('Agreement') entered into this _____ day of _____, 200__ by and between _____, whose address is _____, and Parcel Identification Number (PIN) is _____ ('Lessor') and _____, whose address is _____, and Parcel Identification Number (PIN) is _____ ('Lessee').

1. To relieve traffic congestion in the streets, to minimize any detrimental effects of off-street parking areas on adjacent properties, and to ensure the proper and uniform development of parking areas throughout the Town, the Town of Cary Land Development Ordinance ('LDO') establishes minimum number of off-street parking and loading spaces necessary for the various land uses in the Town of Cary; and
2. Lessee owns property at _____, Cary, N.C. ('Lessee Property') which property does not have the number of off-street parking spaces required under the LDO for the use to which Lessee Property is put; and
3. Lessor owns property at _____, Cary, N.C. ('Lessor Property') which is zoned with the same or more intensive zoning classification than Lessee Property and which is put to a use with different operating hours or different peak business periods than the use on Lessee Property; and
4. Lessee desires to use some of the off-street parking spaces on Lessor Property to satisfy Lessee Property off-street parking requirements, such shared parking being permitted by the Town of Cary LDO, Section 7.8.3; and
5. Town LDO requires that such shared use of parking spaces be done by written agreement.

NOW THEREFORE, in consideration of the premises and the information stated above, the parties agree as follows:

DRAFT

1. SHARED USE OF OFF STREET PARKING FACILITIES

Per Section 7.8.2, Town of Cary Land Development Ordinance (Off-Street Parking Space Requirements), Lessor is required _____ off-street parking spaces and has _____ existing off-street parking spaces, which results in an excess of _____ off-street parking spaces. Lessee is required _____ off-street parking spaces and has _____ existing off-street parking spaces.

Lessor hereby agrees to share with Lessee a maximum of _____ off-street parking spaces associated with Lessor's Property, which is described in more detail on Attachment 1, attached hereto and incorporated herein by reference ('Shared Spaces').

Lessee's interest in such parking spaces is non-exclusive. The Lessee's shared use of parking shall be subject to the following:

> *[describe the time, days etc of the use and the nature of the shared use, limits on time vehicles may be parked, etc.]*

2. TERM

This Agreement shall be effective upon execution by both parties and shall be accepted by the Planning Director and shall not be amended and/or terminated without written consent of both parties and the Cary Planning Director, or his/her designee.

3. SIGNAGE

Directional signage in accordance with Chapter 9, Town of Cary Land Development Ordinance and the written approval of Lessor may be added to direct the public to the shared parking spaces.

4. COOPERATION

The parties agree to cooperate and work together in good faith to effectuate the purpose of this Agreement.

5. SUPPLEMENTAL COVENANTS

No private agreement shall be entered into that overrides this agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date Set forth at the outset hereof.

DRAFT

_____	_____
(Lessor)	(Date)
_____	_____
(Lessee)	(Date)
_____	_____
(Planning Director)	(Date)

_____**COUNTY, NORTH CAROLINA**

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20_____

(Official Seal)

_____
Signature of Notary Public

_____
My Commission Expires

_____**COUNTY, NORTH CAROLINA**

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20_____

(Official Seal)

_____
Signature of Notary Public

_____
My Commission Expires

DRAFT

THE CITY OF SAN DIEGO

RECORDING REQUESTED BY:
THE CITY OF SAN DIEGO
AND WHEN RECORDED MAIL TO:

_____

_____

_____

(THIS SPACE IS FOR RECORDER'S USE ONLY)

SHARED PARKING AGREEMENT

This SHARED PARKING AGREEMENT ("Agreement") is entered into and effective _____, 20_____, by and between _____, _____and the City of San Diego.

RECITALS

WHEREAS, pursuant to sections 142.0535 and 142.0545 of the Land Development Code, the City of San Diego specifies criteria which must be met in order to utilize off-site shared parking agreements to satisfy on-site parking requirements.

NOW, THEREFORE, in consideration of the recitals and mutual obligations of the parties as herein expressed, _____, _____ and the City of San Diego agree as follows:

1. _____ the owner of the property located at _____, agrees to provide _____ the owner of the property located at _____ with the right to the use of (____) parking spaces _____ from _____ as shown on Exhibit A to this Agreement on property located at _____.

   1.1 Applicant: _____ Co-Applicant: _____
   Assessor Parcel No: _____ Assessor Parcel No: _____
   Legal Description: _____ Legal Description: _____
   _____ _____

2. The parking spaces referred to in this Agreement have been determined to conform to current City of San Diego standards for parking spaces, and the parties agree to maintain the parking spaces to meet those standards.

3. The Parties understand and agree that if for any reason the off-site parking spaces are no longer available for use by _____, _____ will be in violation of the City of San Diego Land Development Code requirements. If the off-site parking spaces are no longer available, Applicant will be required to reduce or cease operation and use of the property at Applicant's address to an intensity approved by the City in order to bring the property into conformance with the Land Development Code requirements for required change for required parking. Applicant agrees to waive any right to contest enforcement of the City's Land Development Code in this manner should this circumstance arise.

   Although the Applicant may have recourse against the Party supplying off-site parking spaces for breach of this Agreement, in no circumstance shall the City be obligated by this agreement to remedy such breach. The Parties acknowledge that the sole recourse for the City if this Agreement is breached is against the Applicant in a manner as specified in this paragraph, and the City may invoke any remedy provided for in the Land Development Code to enforce such violation against the Applicant.

Continued on Page 2

DRAFT

4. The provisions and conditions of this Agreement shall run with the land for those properties referenced in paragraph 1 of this document and be enforceable against successors in interest and assigns of the signing parties.

5. Title to and the right to use the lots upon which the parking is to be provided will be subservient to the title to the property where the primary use it serves is situated.

6. The property or portion thereof on which the parking spaces are located will not be made subject to any other covenant or contract for use which interferes with the parking use, without prior written consent of the City.

7. This Agreement is in perpetuity and can only be terminated if replacement parking has been approved by the City's Director of the Development Services Department and written notice of termination of this agreement has been provided to the other party at least sixty (60) days prior to the termination date.

8. This Agreement shall be kept on file in the Development Services Department of the City of San Diego in Project Tracking System (PTS) Project Number: _____ and shall be recorded on the titles of those properties referenced in paragraph 1 of this document.

DRAFT

In Witness whereof, the undersigned have executed this Agreement.

_____
Applicant

Date: _____

_____
Party/Parties Supplying Spaces

Date: _____

_____
Deputy Director

Business and Process Management, Development Services

Date: _____

NOTE: ALL SIGNATURES MUST INCLUDE NOTARY ACKNOWLEDGMENTS PER CIVIL CODE SEC. 1180 ET.SEQ.