Model Language for Adoption of Phase III Watershed Implementation Plan Into Local Comprehensive Plans

What is the Phase III Watershed Implementation Plan?

Watershed Implementation Plans (WIPs) are roadmaps for how Chesapeake Bay states and the District of Columbia, in partnership with federal and local governments, will attain the Bay Total Maximum Daily Load (TMDL). In Virginia, the TMDL calls for a 20.5% reduction in nitrogen, 25.2% reduction in phosphorous and 20.8% reduction in sediment delivered to the Bay. The objective is to have clean up practices, known as best management practices or BMPs, in place by 2025 to reach the goal of a clean Chesapeake Bay and contributing waterways that meet water quality standards. The Central Shenandoah Planning District Commission (CSPDC) was contracted by the Virginia Department of Environmental Quality (DEQ) to coordinate the region's Phase III WIP efforts and to provide coordination and technical assistance to local governments and other stakeholders in the region with implementation efforts. This model language guide serves as a resource for our region's stakeholders to reference as they work toward integrating Phase III WIP language and best management practices into their comprehensive plans.

How does the Phase III WIP fit into my locality's comprehensive plan?

The Phase III WIP "details best management practices (BMPs), along with programmatic actions, necessary to achieve state basin planning targets for nitrogen and phosphorous."[1] While adopting BMPs that align with Phase III WIP goals is not mandatory, DEQ is requesting participation from Bay localities in order to meet state targets. Rather than develop a separate policy document, localities can adopt language already in the Phase III WIP document to easily incorporate BMPs into existing comprehensive plans. Additionally, including Phase III WIP language can assist localities with applying for and receiving funding to implement water infrastructure or water quality projects. Comprehensive plans are not required to use the term "Phase III WIP" specifically, but can reference the document, or use guiding principles to shape the BMPs in their comprehensive plans.

Implementing Stormwater Management Practices in MS4 v. Non-MS4 Localities

Across the state of Virginia, urbanized areas operate under a National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4) permit. MS4 permits require that the urbanized area adopt a Virginia Stormwater Management Plan (see

[1] Virginia Department of Environmental Quality. Phase III WIP. Accessed here.

glossary), " or "VSMP; these plans manage the quality and quantity of runoff resulting from land-disturbing activities and can include local ordinances, rules, permit requirements, annual standards and specifications, policies and guidelines, and more. Augusta County, City of Harrisonburg, City of Staunton and City of Waynesboro have a Municipal Separate Sewer System (MS4) program. Stormwater management policies are easier to implement in these localities, because best management practices are already built in to requirements of the MS4 permit.

Non-MS4 localities are typically rural communities with more privately held land.[2] Non-MS4 communities can still choose to adopt a VSMP – in our region, Rockingham County, Rockbridge County and the City of Buena Vista have voluntarily adopted a VSMP. Bath and Highland Counties, as well as the City of Lexington do not have a VSMP.[3] For non-MS4 localities and/or those that have not adopted a VSMP, stormwater regulation is more difficult to enforce. Non-MS4 localities may adopt more broad, aspirational language into their comprehensive plan, whereas MS4 localities may opt for more stringent, enforceable language. Regardless, the stormwater management best practices included in the Phase III WIP are recommendations, and localities are not obligated to adopt stormwater management techniques beyond their local permitting requirements.

Broad v. Stringent Language for Comprehensive Plan Inclusion

When adopting Phase III WIP language into a comprehensive plan, localities should consider their stormwater management goals. Localities have the option to 'mix-and-match' policies; using stringent language for items they want to enforce, and broad language for items they want to encourage or work towards.[4]

Broad terms may include:

- Support
- Advance
- Assess
- Identify
- Coordinate
- Enhance Understanding
- Promote
- Seek
- Facilitate
- Encourage

Stringent terms may include:

- Create
- Amend
- Revise
- Evaluate
- Implement
- Establish
- Develop
- Incorporate
- Expand
- Ensure
- Maintain

[2] Wetlands Watch. Non-MS4 Stormwater Management. Accessed here.
[3] Bath County does not have a VSMP, but has adopted a Virginia Erosion and Sediment Control Program (VESCP).
[4] Tampa Bay Regional Planning Council. CCMP Crosswalk and Model Language Guidelines for Integrating Environmental Best Management Practices into Comprehensive Plans. Accessed here.

In our region, non-MS4 localities may implement broader language when discussing stormwater management policies. For example, the City of Lexington uses terms such as “promote,” “encourage,” and “strengthen” to describe BMP programs and green infrastructure.

Regional Models for Incorporating BMP Language into Comprehensive Plans

The following strategies are a compilation of best management practices included in comprehensive plans across the CSPDC region. CSPDC staff carefully reviewed the most recent comprehensive plan of each locality, and selected several BMPs from each location to highlight exemplary BMP language. BMPs are divided into seven categories; incorporating Chesapeake Bay/TMDL language, low impact development (LID), stormwater planning and regulation, zoning regulation and ordinances, green infrastructure incentives, smart growth principles, and agricultural BMPs.

Strategies for Incorporating Chesapeake Bay/TMDL Language

Locality: Augusta County (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Protect the fundamental integrity of the county’s natural environmental systems into the long-term future for the enjoyment and benefit of local citizens, business, tourism, and recreation.	Participate in state and regional programs to protect local waterways, the James and Shenandoah Rivers, and the Chesapeake Bay. Develop and implement a Chesapeake Bay TMDL Action Plan in accordance with the county’s MS4 permit. For areas outside of the county’s MS4 boundary, work with the Department of Conservation & Recreation’s Shenandoah Valley Office to identify, prioritize, and implement appropriate measures in the Chesapeake Bay TMDL that also fulfill the goals and objectives noted in this Comprehensive Plan. Seek grant and in-kind funding to implement demonstration projects and innovative practices.	Augusta County Comprehensive Plan (2015); III.K; Goal 1, Objective D, Policy 1 (pg. 54)
Ensure that all county residents have access to a safe and adequate water supply and that private water and wastewater systems do not pose long-term public health or environmental threats to the county and its residents.	The county should consider a mandatory septic pump-out program adapted from the requirements of the Chesapeake Bay Preservation Act and Regulations.	Augusta County Comprehensive Plan (2015); III.O; Goal 1, Objective A, Policy 2 (pg. 80)

Locality: City of Harrisonburg (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
To support the City with community facilities, infrastructure, and services, which allow for sustainable growth and are accessible, equitable, efficient, cost-effective, and sensitive to the environment.	To continue to support the Harrisonburg-Rockingham Regional Sewer Authority (HRRSA) to meet voluntary and other goals for nutrient reduction of the Chesapeake Bay Total Maximum Daily Load (TMDL).	City of Harrisonburg Comprehensive Plan (2018); Goal 14, Objective 14.2, Strategy 14.2.2. (pg. 16-21)

Locality: Bath County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Generally, development should be located in areas where [public utilities] can be provided for the least cost. The Comprehensive Plan should serve as a guide for decision making and establish policy guidelines for when, where, and how to provide public utilities.	If a new plant is required, location, size, design, technology, Department of Environmental Quality (DEQ) and Health Regulations are important considerations. Wastewater treatment plants over 650,000 gallons per day that discharge into the Chesapeake Bay estuary and watershed must meet strict requirements. Removing I&I (inflow and infiltration) water from the collection lines is an ongoing project for the Authority. Initiatives to protect the Chesapeake Bay and the environment, development, and demands to treat wastewater by regional treatment plants or by separate Bath County Service Authority plants are expected to increase.	Bath County Comprehensive Plan (2014); Ch. 8 (pg. 8-6)

Locality: Rockingham County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Preserve the quality of natural resources (surface water, groundwater, air, soil, quiet, night sky).	Continue to participate in TMDL (total maximum daily [pollutant] load) water quality studies for impaired streams.	Rockingham County Comprehensive Plan (2004); Section II, Natural Resource Strategies, Polices, and Actions, Goal 1, Strategy 1.1.2 (pg. 2-69).

Localities may also choose to directly reference the CSPDC's role in Phase III WIP in their plan; for example, the City of Lexington uses the following language:

As part of the CSPDC, the City has access to the Chesapeake Bay Watershed Implementation Plan resources and tools. The plan calls for the installation of green infrastructure practices to improve local and regional water quality (City of Lexington Comprehensive Plan (2020), pg. 38).

Best Management Practice: Low Impact Development (LID)

Locality: Augusta County (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
The county will strive to be a good steward of the environment.	The county will utilize Low Impact Development (LID) designs for newly constructed facilities, and for renovations of existing county facilities, where necessary and practical.	Augusta County Comprehensive Plan (2015); III.E; Goal 3, Objective A, Policy 3 (pg. 32)
Promote efficient and effective stormwater strategies appropriate to each Policy Area to protect water quality and control flooding.	Seek to demonstrate LID techniques on new public and private projects as an outreach and learning tool. Seek grant funding to help defray design and construction costs.	Augusta County Comprehensive Plan (2015); III.K, Goal 2, Objective B, Policy 1 (pg. 56)

Locality: Rockbridge County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Protect and preserve the scenic beauty and environmental quality of the County.	The limitations of natural features such as air, water, slope, geology, soils and natural habitat should be recognized when considering residential, commercial, industrial, and agricultural growth. Areas within the 100-year floodplain should be designated for agriculture, forestry, recreation and other such uses not requiring permanent structures.	Rockbridge County Comprehensive Plan (2016), Ch.2 (pg. 76).

Locality: Rockingham County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Preserve the quality of natural resources (surface water, groundwater, air, soil, quiet, night sky).	Promote the setting aside of floodplain lands as open space during the development process to form the backbone of a countywide greenway system for flood protection, water quality protection, wildlife habitat preservation, and passive recreation. Encourage low-impact development whenever appropriate and feasible.	Rockingham County Comprehensive Plan (2004); Section II, Natural Resource Strategies, Polices, and Actions, Goal 1, Strategy 1.1.9 & 1.1.14 (pg. 2-70).

Locality: City of Lexington (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Protect, preserve, and promote Lexington's natural ecosystems and green infrastructure as a cornerstone of sustainable development and social, environmental, and economic well-being.	Promote the installation of stormwater best management practices, such as bioswales, pervious surfaces, and rain gardens, including on City property and parking. Limit the extent of impervious surfaces that degrade water quality by considering reductions to minimum parking requirements and encouraging the use of pervious surfaces in development projects.	City of Lexington Comprehensive Plan (2020); Goal GI 3.4 & 3.6 (pg. 43).

Locality: City of Staunton (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Ensure quality and effective public services that meet the needs of citizens and the business community that is balanced with the City's economic base and resources.	Encourage extension of water and sewer utility lines only where it is planned, and discourage extension of water and sewer utilities into areas where they might promote the development of identified environmentally critical areas.	City of Staunton Comprehensive Plan (2018); Goals & Objectives (pg.1-9).

Locality: City of Waynesboro (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
By 2020, the City will have procured an analysis of the risk of flooding Downtown.	A significant portion of downtown remains vulnerable to flooding potential and all of its attendant consequences including reduced valuation for these properties. Few significant investments are going to occur anywhere that is likely to be flooded under current market conditions.	City of Waynesboro Comprehensive Plan (2018), pg. 23
By 2023 the city's park system will be expanded to include a redeveloped Constitution Park that will extend from the South River to Arch Avenue	Constitution Park is the city's connection to the beautiful South River. Unfortunately, it feels disjointed from Downtown as a result of the block of buildings along the east side of Arch Avenue (between Main Street and Short Street) that create a visual and physical barrier and include no retail or business magnet that would draw pedestrians to this side of Arch Avenue. Over time, the City has an opportunity to begin acquisition and demolition of this block in an effort to reclaim land for green space – an opportunity heightened by the fact that this entire block lies in the heart of the flood zone, and is negatively impacted during regular flood events.	City of Waynesboro Comprehensive Plan (2018), pg. 50.

Best Management Practice: Stormwater Planning and Regulation

Locality: Augusta County (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Promote efficient and effective stormwater strategies appropriate to each Policy Area to protect water quality and control flooding.	Develop water-shed based stormwater plans for the MS4 area and remaining Urban Service Areas (USAs) that allow efficient land development while protecting water quality and controlling stormwater quality that can damage downstream channels and property. Create a prioritized list of the MS4 area and the remaining USA watershed-based stormwater plans so that the county can pursue these plans in an incremental fashion.	Augusta County Comprehensive Plan (2015); III.K; Goal 2, Objective A Policy 1 (pg. 55)
Promote efficient and effective stormwater strategies appropriate to each Policy Area to protect water quality and control flooding.	Keep abreast of changes to stormwater regulations at the state level, and modify county ordinances and programs to be consistent with state programs. Continue to develop and improve the MS4 program to be consistent with State & Federal Guidelines. Conduct program through partnerships. Work with the Central Shenandoah Planning District Commission and any neighboring localities … where regional efforts may serve to reduce costs or provide consistency between programs.	Augusta County Comprehensive Plan (2015); III.K; Goal 2, Objective B Policies 2 & 3 (pg. 56)

Locality: City of Buena Vista (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
The City of Buena Vista will achieve a balanced and sustainable use of natural resources in the community to accommodate the economic and noneconomic needs of residents, industries, and visitors.	Develop programs that educate citizens about the effects of stormwater runoff on water quality, wellhead protection area boundaries and related pollution prevention measures. Prepare and adopt a wellhead protection management plan. Manage floodplains, rivers, groundwater, and other water resources for multiple uses including flood and erosion hazard reduction, fish and wildlife habitat, open space, recreation, and water supply.	City of Buena Vista Comprehensive Plan (2011); Ch. 3; Goal 3, Objective 3, Actions 3F, 3G, & 3I (pg. 20-21).

Locality: City of Harrisonburg (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
To support the City with community facilities, infrastructure, and services, which allow for sustainable growth and are accessible, equitable, efficient, cost-effective, and sensitive to the environment.	To continue complying with the Small Municipal Separate Storm Sewer System (MS4) permit by implementing policies, programming, and maintenance activities to meet the required six minimum control measures; public education and outreach, public involvement, illicit discharge detection and elimination, construction site stormwater runoff control, post-construction stormwater management, and good housing keeping and pollution prevention. To use stormwater management techniques, that are both effective control measures and enhance the urban environment with aesthetically pleasing features, such as expansion of urban tree canopy and bioretention.	City of Harrisonburg Comprehensive Plan (2018); Goal 14, Objective 14.3, Strategies 14.3.1 & 14.3.3 (pg. 16-22).

Locality: City of Staunton (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Practice good stewardship of the environmental resources within and surrounding the City by protecting environmentally sensitive areas, preserving open space and natural habitat (including dark skies), minimizing pollution of all kinds, and encouraging sustainability and conservation practices.	Encourage the implementation of Mitigation Strategies for the City included in the Central Shenandoah Valley Hazard Mitigation Plan. Take a watershed approach to protect water resources, through efforts such as reducing pollution and litter, encouraging stream buffers and restoration of riparian areas, increasing tree canopy, preserving open space, and educating the public. Continue implementation of stormwater best management practices.	City of Staunton Comprehensive Plan (2018), Goals and Objectives (pg. 1-1).

Best Management Practice: Zoning Regulation and Ordinances

Locality: Augusta County (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Promote development layout that protects natural and scenic resources by design.	Adopt development design standards, known as performance standards, that can be applied to projects subject to rezoning requests, special use permits, and other non-administrative approvals (with the exception of any agricultural and forestry activities). Consider adopting performance standards that can be incorporated into the zoning and subdivision ordinances, and which would apply to all development applications. Consider making the standards mandatory in the Rural Conservation and Agricultural Conservation Areas, while maintaining flexibility in the Urban Service and Community Development Areas.	Augusta County Comprehensive Plan (2015); III.K; Goal 3, Objectives A & B (pg. 56)

Locality: Bath County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Protect local water resources and unique aquatic habitats.	Utilize zoning, subdivision, and site plan requirements to reduce the amount of impervious surface built in watersheds. Require all industries desiring to locate in the County to meet and maintain water quality standards as may be set forth by regulation/law.	Bath County Comprehensive Plan (2014); Ch. 6, Goal 4, Objectives h & j (pg. 6-10).

Locality: Rockbridge County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Protect and preserve the scenic beauty and environmental quality of the County.	Meet Federal and State standards for air and water quality in all areas of the County. Continue to enforce the County Erosion and Sediment Control Ordinance. Development along the footslopes of the Blue Ridge Mountains and other areas should be carefully managed through appropriate ordinances in order to preserve the groundwater resources of the area.	Rockbridge County Comprehensive Plan (2016); Ch. 2, pg. 78

Locality: Rockingham County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Preserve the quality of natural resources (surface water, groundwater, air, soil, quiet, night sky).	Limit impervious surfaces through lot coverage ratios; amend the Zoning and Subdivision Ordinances to accomplish this.	Rockingham County Comprehensive Plan (2004); Section II, Natural Resource Strategies, Polices, and Actions, Goal 1, Strategy 1.1.7 (pg. 2-69).

Locality: City of Buena Vista (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
The City of Buena Vista will achieve a balanced and sustainable use of natural resources in the community to accommodate the economic and noneconomic needs of residents, industries, and visitors.	Review and update existing zoning and subdivision regulations as necessary to ensure the goals of environmental preservation are being achieved. Review and update landscaping ordinances. Develop an urban forest management plan.	City of Buena Vista Comprehensive Plan (2011); Ch. 3; Goal 3, Objective 3, Actions 3B, 3D, 3E, 3M, & 3N (pg. 20-21).

Locality: City of Lexington (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Protect, preserve, and promote Lexington's natural ecosystems and green infrastructure as a cornerstone of sustainable development and social, environmental, and economic well-being.	Continue strengthening zoning and development regulations that address landscaping, tree preservation, and native plants. Consider incentives to promote tree planting and preservation beyond minimum requirements.	City of Lexington Comprehensive Plan (2020); Goal GI 3.4 & 3.6 (pg. 43).

Best Management Practice: Green Infrastructure Incentives

Locality: Augusta County (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Promote efficient and effective stormwater strategies appropriate to each Policy Area to protect water quality and control flooding.	Establish policies in the stormwater, zoning, and subdivision regulations that provide incentives for naturalized and revegetated floodplains, riparian buffers, and natural channel stream restoration. Incentives that can be considered include: density bonuses, stormwater credits, recognition as 'Clean Water Sites', and possible cost-share funds.	Augusta County Comprehensive Plan (2015); III.K; Goal 2, Objective C, Policy 1 (pg. 56)
Sustain the natural resources base that allows for productive, healthy, and environmentally-sound agricultural and forestry land uses.	Consider providing incentives for agricultural and forestry BMPs whereby landowners that implement BMPs are offered tax or other financial incentives.	Augusta County Comprehensive Plan (2015); III.K; Goal 4, Objective B, Policy 3 (pg. 60)

Locality: City of Harrisonburg (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
To preserve and enhance the City's natural environment for future generations through education and policies that encourage development that is compatible with nature and builds community resiliency and social responsibility within the community.	To create a set of voluntary environmental performance standards for public and private development and redevelopment projects, and to develop an incentive program to encourage implementation. To continue to seek ways to create incentives for private property owners to implement stormwater best management practices to improve the quality of stormwater runoff by offering reductions in the stormwater utility fee for practices that can be counted toward the City's MS4 stormwater permit and the Chesapeake Bay TMDL Action Plan requirements.	City of Harrisonburg Comprehensive Plan (2018); Goal 11, Objective 11.3, Strategy 11.3.6 (pg. 16-13).
To support the City with community facilities, infrastructure, and services, which allow for sustainable growth and are accessible, equitable, efficient, cost-effective, and sensitive to the environment.	To eliminate septic systems in the City by promoting a septic to sanitary sewer connection conversion incentives program and/or offering financial assistance to encourage connections to the sanitary sewer systems.	City of Harrisonburg Comprehensive Plan (2018); Goal 14, Objective 14.2, Strategy 14.2.3 (pg. 16-21).

Locality: City of Staunton (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Ensure quality and effective public services that meet the needs of citizens and the business community that is balanced with the City's economic base and resources.	Encourage green and sustainable initiatives and integrate emerging technologies that promote use of efficient and renewable energy.	City of Staunton Comprehensive Plan (2018); Goals & Objectives (pg.1-9).

Best Management Practice: Smart Growth Principles

Locality: Bath County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Utilize compact building design.	Use compact development coupled with onsite best management practices to improve environmental outcomes.	Bath County Comprehensive Plan (2014); Appendix B, S.G. Principle #2 (pg. B-2).
Preserve open space, farmland, scenic views, and critical environmental areas.	Use land management techniques and acquisition to protect drinking water sources. Adopt a green infrastructure plan.	Bath County Comprehensive Plan (2014); Appendix B, S.G. Principle #6, (pg. B-6).
Strengthen and direct development towards existing communities.	Encourage infill by adopting innovative stormwater regulations and practices.	Bath County Comprehensive Plan (2014); Appendix B, S.G. Principle #7 (pg. B-7).

Locality: City of Harrisonburg (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
To improve the quality of land use and development patterns.	To encourage or provide incentives for new development and redevelopment to preserve existing trees and vegetative areas and/or add new trees and plantings. To require or provide incentives for open space or 'cluster' development to preserve green space within new residential subdivisions.	City of Harrisonburg Comprehensive Plan (2018); Goal 4, Objective 4.1, Strategies 4.1.5 & 4.1.6 (pg. 16-4).

Best Management Practice: Agricultural BMPs

Locality: Augusta County (MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Ensure that agricultural and forestry operations use environmentally sound methods.	Encourage BMPs through cooperation with those federal, state and county agencies, including the Headwaters Soil and Water Conservation District, the Natural Resources Conservation Service, and the Virginia Department of Forestry, that provide technical support to the farming and forestry industries. The county should encourage landowners to develop a resource management plan, conservation plan or forest management plan for their farming and forestry operations.	Augusta County Comprehensive Plan (2015); III.B; Goal 3, Objective A, Policies 1 & 2 (pg. 20-21).

Locality: Bath County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Conserve the County's soil resources and protect prime soils. Protect local water resources and unique aquatic habitats.	Acknowledge the County's potential for affecting soil and water quality on a regional scale by supporting the County's Erosion and Sediment Control Ordinance. Support state/federal programs that improve nutrient run-off for agriculture programs.	Bath County Comprehensive Plan (2014); Ch. 6, Goals 3 & 4, Objective g (pg. 6-10).

Locality: Highland County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Maintain a viable, diverse economy for Highland County citizens.	Request the Virginia Cooperative Extension and Mountain Soil and Water Conservation District to continue to provide strong support for farm management planning and best management practices for local farms.	Highland County Comprehensive Plan (2011); Table 22, E5-12 (pg. IV-20).

Locality: Rockingham County (Non-MS4)

GOAL	MODEL LANGUAGE USED	CITATION
Preserve the quality of natural resources (surface water, groundwater, air, soil, quiet, night sky).	Consider requiring nutrient management plans for all intensive agricultural enterprises (which are not required only for poultry). Seek continued and expanded funding for agricultural BMPs.	Rockingham County Comprehensive Plan (2004); Section II, Natural Resource Strategies, Polices, and Actions, Goal 1, Strategy 1.1.7 (pg. 2-69).

Incorporating Local Context into Comprehensive Plans

Although 56% of the state of Virginia is located within the Chesapeake Bay watershed, constituents within the CSPDC region may not be aware of how their local waterways are connected to the Bay. Localities may want to include a brief description of their connecting waterways within the comprehensive plan to relate stated policies and objectives to Chesapeake Bay TMDL goals. The City of Lexington provides useful model language:

The creeks and rivers in and around Lexington are wonderful natural assets that provide ecosystem, habitat, and recreation benefits. Lexington is located with the McCorkle watershed and the Woods Creek watershed, which flows into the James River and ultimately to the Chesapeake Bay. The Maury River is also the source of Lexington's water supply.

Highland County also demonstrates how local waterways relate to the Chesapeake Bay:

Highland County is known for its tree covered mountains and open valleys, and its numerous streams which are the headwaters of major river systems that flow to the Chesapeake Bay. (Highland County Comprehensive Plan (2011), Part 1, pg. 1-3).

The City of Harrisonburg relates its local watersheds to the larger Chesapeake Bay TMDL goals and describes their city-wide TMDL Action Plan:

The City's storm sewer system drains into six different sub watersheds. Ultimately, all six subwatersheds drain into the Shenandoah River, the Potomac River, and the Chesapeake Bay. The Chesapeake Bay does not meet water quality standards and is listed as impaired. Due to this impairment, the US EPA issued a Chesapeake Bay TMDL. The needed pollutant reductions have been divided among the six states in the Chesapeake Bay watershed. As a result, the City of Harrisonburg has an allocated pollution reduction requirement for phosphorous, nitrogen, and sediment. The City's plan to reduce these pollutants can be found in the City's Chesapeake Bay TMDL Action Plan which is maintained by the Department of Public Works.

Localities may also use more general terms to describe their local water conditions. For example, Bath County uses the following language:

Preserve and protect the water quality, scenic beauty, and natural character of the Cowpasture and Jackson Rivers, as well as Back Creek, by using established Best Management Practices. (Bath County Comprehensive Plan (2014), Ch. 11, pg. 11-25).

Though the above description does not specifically mention the Chesapeake Bay, it puts the use of BMPs to maintain water quality into a local context.

Referencing the CSPDC Stormwater Management Best Practices Toolkit

In 2021, The CSPDC produced a Stormwater Management Best Practices Toolkit, which serves as a resource for our region's stakeholders to reference as they work toward implementing BMPs in their localities. The toolkit includes green infrastructure techniques, resources for incorporating green and gray infrastructure, specific strategies for municipalities, funding resources, and more. The toolkit provides linked resources for each category, which may provide further guidance for model language.

***Glossary of Terms for Use in Comprehensive Plans*[5]**

Combined Sewer Overflow (CSO): combined sewer systems collect both stormwater runoff and sanitary sewerage in the same pipe to be carried to a wastewater treatment plant. CSOs occur during wet weather events, often leading to pollution of natural waterways.

Environmental Site Design (ESD): an effort to mimic natural systems along the whole stormwater flow path through combined application of a series of design principles. Reduce the volume of stormwater on its way to the stream, thereby reducing the amount of conventional stormwater infrastructure required.

Green infrastructure: natural systems that capture, cleanse, and reduce stormwater runoff using plants, soils, and microbes. Green infrastructure can be interconnected networks of open spaces and natural areas, or site-specific BMPs.

Low-Impact Development (LID): stormwater management approach that seeks to manage runoff using distributed and decentralized micro-scale controls. LID mimics predevelopment hydrology through small-scale landscape practices and design approaches. LID is part of green infrastructure.

Municipal Separate Storm Sewer System (MS4): publicly owned conveyance or system of conveyances that discharges to waters. Typically include pipes, ditches or gullies, etc. Owned by government entity with the purpose of conveying stormwater.

Stormwater BMP: Best Management Practices for stormwater practices/stormwater treatment; can be structural or non-structural

Structural BMP: BMPs that generally require construction and become permanent features. Examples include ponds, wetlands, bioretention swales, etc.

Non-structural BMP: used in lieu of structural BMPs. Examples include minimization of impervious surfaces, restoration of natural areas, changing behaviors that reduce runoff, etc. Under the green infrastructure/LID umbrella.

Smart Growth: refers to coordinated planning efforts that support economic, community, and environmental goals. Relates urban infrastructure to environmental features as a strategy for managing flooding at the community scale. Encourages infill and redevelopment, and coordination of various planning efforts.

Total maximum daily load (TMDL): calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to

[5] Definitions obtained from Center for Watershed Protection, Managing Stormwater in Your Community: A Guide for Building an Effective Post-Construction Program. Accessed here.

the pollutant’s sources. Sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. Must include a margin of safety to ensure safe use, as well as seasonal variation considerations. The Phase III Watershed Implementation Plan is based on the Chesapeake Bay TMDL.

Virginia Stormwater Management Program: "Virginia Stormwater Management Program" or "VSMP" means a program approved by the State Board after September 13, 2011, that has been established by a locality to manage the quality and quantity of runoff resulting from land-disturbing activities and shall include such items as local ordinances, rules, permit requirements, annual standards and specifications, policies and guidelines, technical materials, and requirements for plan review, inspection, enforcement, where authorized in this article, and evaluation consistent with the requirements of Article 2.3 of Chapter 3.1 of Title 62.1 of the Code of Virginia, and associated regulations.

Watershed: the land area from which water drains into a stream, channel, lake, reservoir, or other body of water.

Watershed management: multi-jurisdictional collaboration to identify and address cross-boundary water quality problems and flooding.