

**Charles County Government**  
**Stormwater Management & Storm Drainage Ordinance**  
**Checklist**

This checklist must be completed in its entirety. If an item is not applicable then please mark in the appropriate box or note as N/A. Charles County reserves the right to reject any incomplete package. All items are to be typed or completed in black ink.

<b>Basic Information</b>
Project Name:
Applicant:
Design Firm:

<b>SECTION</b>	<b>ITEM</b>	<b>Applicant</b>			<b>for county use</b>
		provided	not provided	not applicable	
<b>4.0</b>	<b>EXEMPTIONS</b>				
4.1	Agricultural land managements practices				
4.2	New Development < 5,000 sf not located in critical overlay zone				
4.4	Regulated under specific State laws				
<b>5.0</b>	<b>WAIVERS</b>				
5.1	Quantitative waiver for project in watershed management plan				
5.2A.	Direct Discharge to tidally influenced waters (documentation provided)				
5.3A.	Qualitative waiver for in-fill project (documentation provided)				
5.3B.	Redevelopment project with no increase in impervious area and less than 5,000 sf disturbance				
5.4	Impact study provided showing that there is no adverse impact to stream quality				
5.5	Watershed management plan waivers for implementing different swm policies				
5.5A.	Detailed hydrologic any hydraulic studies				
5.5B.	Quantity and Quality evaluated				
5.5C.	Cumulative impact assessment				
5.5D.	Identification of existing flooding and receiving channel conditions				
5.5G.	Consistent with general performance standards in the Design Manual				
5.5H.	Approved by MDE				
5.6	Quantitative waiver				
5.6A.	Project included in the regional facility design under ultimate conditions (documentation provided)				

5.6B.	Project has capacity for the site (documentation is provided)				
5.6B.(1)	On-site WQv and Rev unless provided in the regional facility and there is a manmade system to the offsite facility				
5.6B(2)	There is an adequate manmade stormwater conveyance system to the facility (documentation is provided)				
5.6B.(2)a)	Manmade channel analysis				
5.6B.(2)b)	Natural channel analysis				
5.6B.(2)c)	No downstream flooding or erosion (documentation provided)				
5.6B.(3)	Legal rights to utilize storage in offsite facility				
5.6B.(4)	Offsite easements exist (documentation provided)				
5.6B.(6)	Offsite facility is in Charles County maintenance program and I&M agreements exist				
5.7	Fee in-lieu-of provided for waivers				
<b>6.0</b>	<b>TRANSITIONAL EXEMPTION AND ADMINISTRATIVE VARIANCES</b>				
6.1	Variance submitted under separate letter to the Chief				
<b>7.0</b>	<b>DESIGN CRITERIA</b>				
7.2A.	BMPs designed per the Design Manual				
7.2B.	Overbank flood protection Qp <sub>10</sub> waiver				
7.2B.(1)	No flooding or drainage problems (documentation provided)				
7.2B.(2)	Improvements proposed for downstream flooding or drainage				
7.2B.(3)	SWM facility drains to regulated floodplain				
7.2C.(4)	SWM facility drains to an adequate swm conveyance system designed for ultimate development of watershed				
7.2D.	Redevelopment - no increase in impervious area and disturbance greater than 5,000 sf				
7.2D.(1)a)	Twenty percent (20%) reduction in impervious area				
7.2D.(1)b)	SWM quality provided for twenty percent (20%) of impervious area for the site				
7.2D.(1)c)	Combination of impervious area reduction and swm quality control equal to twenty percent (20%) impervious area of the site				
7.2D.(1)d)	Practical alternatives				
7.2D.(1)d)1.	Offsite bmp provided				
7.2D.(1)d)2.	Watershed or stream restoration				
7.2D.(1)d)3.	Retrofitting existing structures				
7.2D.(1)d)4.	Drainage improvements				

7.2D.(1)d)5.	"Fee-in-lieu"				
<b>7.3</b>	<b>STORMWATER MANAGEMENT MEASURES</b>				
7.3B.(1)	Minimize the need for maintenance				
7.3B.(2)	Access designed				
7.3B.(3)	Drainable				
7.3B.(4)	Structurally sound				
7.3B.(5)	Safety features provided (documentation provided)				
7.3B.(6)a)	Twenty five foot (25') buffer from residentially zoned properties				
7.3B(6)b)	Landscaping provided per the Design Manual				
7.3B.(7)	Avoid concentrated discharge from ponds through downstream residential lots.				
7.3B.(7)(a)	Offsite improvements offset by watershed or stream restoration plan				
7.3B.(7)(b)	Offsite improvements offset by retrofitting of existing structure				
7.3B.(7)c)	Offsite improvements offset by drainage improvements				
7.3.B.(7)d)	Offsite improvements offset by "fee-in-lieu"				
7.3B.(8)	One foot (1') freeboard for all non SCS 378 ponds measured from 100-year water surface				
7.3B.(9)	Wet ponds designed to account for bank/shore erosion				
7.3E.	Protective enclosure provided in areas where small children may congregate				
7.3F.	No ponding in parking areas of residential developments. Ponding of other developments limited to 25% of fringe parking areas and no deeper than six inches (6").				
7.3I.	No direct discharge of road drainage to wetlands without pretreatment.				
7.3J.	SWM Facilities outside of Streams, Regulatory Floodplains, etc.				
7.3K.	SWM facilities located outside of County property and right-of-ways.				
<b>7.5</b>	<b>STORMWATER CONVEYANCE - SUBDIVISIONS</b>				
7.5B.	Existing conveyance systems receiving discharge analyzed and improved if inadequate.				
7.5E.	Major conveyance systems enclosed in easements and located outside of residential lots				
7.5G.	Conveyance systems designed based on the ultimate development				
7.5H.	Design professional has signed and sealed all plans, reports, letters and documents submitted.				
7.5J.	Project report has been provided and includes computer generated input and output on a floppy disc.				
7.5K.	Drainage area maps are included on the plans				
7.5N.	100-year surcharge shown with overflow paths.				
7.5O.	Yard inlets receive 2 acres or less of drainage and show 100-year ponding (less than 24").				
7.5Q.	Pipe slopes (storm drain systems) at 0.5% or greater with minimum full flow velocity of 3 fps.				
7.5R.	Designed drainage ditches at slopes of 1.5% or greater.				

7.5T.	Culverts designed based on 10-year storm with 100-year storm below edge of pavement.				
7.5W.	Five foot (5') horizontal and Twelve inches (12") vertical clearance between storm drains and other utilities				
7.5AA.	Minimum five foot (5') gutter pan on yard inlets. No grate inlets allowed in residential areas.				
7.5BB.	Grate inlets not allowed in closed section roads				
7.5CC.	Cover over pipes shall be 0.75' below flexible pavements sections or per manufacturer's requirements whichever is greater.				
7.5DD.	Anchors provided for pipes at grades of 15% or greater.				
7.5EE.	Riprap lining not allowed in roadside ditches or publically maintained channels.				
7.55FF.	Scour analysis required for all bridges.				
7.55GG.	Arch culverts are not allowed for publically maintained structures.				
<b>8.0</b>	<b>ADMINISTRATION</b>				
8.3A.(3)	Soil investigation				
8.3A.(4)	Topography including offsite areas				
8.3A.(6)	Geotechnical investigations				
8.3A.(7)	Descriptions of all water courses, impoundments, or wetlands on adjacent sites which receive discharges from the site.				
8.3B.(1)	Hydrology computations				
8.3B.(2)	Hydraulic computations				
8.3B.(3)	Structural computations				
8.3B.(4)	Unified Sizing Criteria volume computations				
8.3B.(6)	Scour analysis computations				
8.3B.(7)	Drainage computations				
8.3C.(1)	Location map shown on plans				
8.3C.(4)	Proposed improvements shown on plans				
8.3C.(5)	Existing structures shown on plans				
8.3C.(6)	All easements and right-of-ways shown on plans				
8.3C.(7)	100-year floodplains and onsite wetlands shown on plans				
8.3C.(8)	Structural and construction details shown on plans				
8.3C.(9)	Sequence of construction shown on plans				
8.3C.(10)	Site data including disturbed area, new impervious area and total impervious area provided on plans				
8.3C.(11)	Unified Sizing Criteria Volumes (table provided on plans)				
8.3C.(12)	Table of plantings shown on plan				
8.3C.(13)	Soil boring logs and test locations shown on plan				
8.3C.(14)	Pre and post development drainage area maps shown on plan				
8.3C.(15)	Location of all existing utilities shown on plan				
8.3C.(16)	Structural details shown on plan				
8.3C.(17)	Notes specifying all materials used shown on plan				
8.3C.(18)	Construction specifications shown on plan				

8.3E.	Construction cost estimate shown on plans				
8.3F.	Maintenance schedule for swm facilities shown on plan				
8.4	Engineer's and developer's certification				
8.5	Inspection and Maintenance Agreements and/or easement documents as necessary				
<b>10.0</b>	<b>INSPECTION</b>				
10.2	Inspection notification requirements shown on plans (48 hours prior to commencement of work and 48 hours prior to specific stages)				
10.2.A	Infiltration (drywells, trenches, basins, etc.)				
10.2A.(1)	Upon completion of preexcavation				
10.2A.(2)	Upon completion of excavation				
10.2A.(3)	During placement of filter fabric, observation well, and base aggregate material				
10.2A.(4)	During construction of concrete structures				
10.2A.(5)	During construction of cut-of trench and embankment				
10.2A.(6)	During the placement of surface layer				
10.2A.(7)	During the final excavation				
10.2A.(8)	Upon completion of final grading and establishment of permanent vegetative stabilization				
10.2B.	Flow Attenuation devices (open channels, ditches, etc.)				
10.2B.(1)	Upon completion of pre-excavation and construction of temporary sediment and erosion control measures				
10.2B.(2)	During placement and backfill of underdrain systems for drywells				
10.2B.(3)	During construction of check dams, diaphragms, or weirs				
10.2B.(4)	Upon completion of final grading and establishment of permanent vegetative stabilization				
10.2C.	Ponds (including wetland ponds)				
10.2C.(1)	Upon completion of pre-excavation and construction of temporary sediment and erosion control measures				
10.2C.(2)	Upon completion of excavation to sub-foundation and when required, installation of structural supports or reinforcement for structures, including but not limited to:  a) Core trenches for structural embankments; b) Inlet and outlet structures, anti-seep collars or diaphragms, and watertight connectors on pipes; and c) Trenches for enclosed storm drainage facilities.				
10.2C.(3)	During placement of structural fill, concrete and installation of piping and catch basins				
10.2C.(4)	During backfill of foundations and trenches				
10.2C.(5)	During embankment construction				
10.2C.(6)	Upon completion of final grading and establishment of permanent stabilization				
10.2E.	Filtering systems				
10.2E.(1)	During excavation to subgrade				
10.2E.(2)	During placement and backfill of underdrain systems				
10.2E.(3)	During placement of geotextiles and all filter media				

10.2E.(4)	During construction of appurtenant conveyance systems such as flow diversion structures, prefilters and filters, inlets, outlets, orifices, and flow distribution structures				
10.2E.(5)	Upon completion of final grading and establishment of permanent stabilization				
10.2F.	Storm Drain System				
10.2F.(1)	At beginning of excavation				
10.2.F.(2)	During pipe laying and backfill				
10.2.F.(3)	During placement of precast or construction of cast-in placed structures				
10.2.F.(4)	During placement of outlet protection				
10.2.F.(5)	Upon completion of final grading and establishment of permanent stabilization				
10.2.G.	Open channel systems				
10.2.G.(1)	During excavation to subgrade				
10.2.G.(2)	During placement and backfill of under drain systems for dry swales				
10.G.(3)	During installation of diaphragm, check dams, or weirs				
10.G.(4)	Upon completion of final grading and establishment of permanent stabilization				

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