

Deletes metric references	B. The minimum and maximum cover shall conform to VDOT standard PC-1 for drainage pipes within the street right-of-way. C. Pipe laid outside of street right-of-way shall have a minimum of one (1) foot (300 millimeters) of cover. D. If the minimum cover requirements as set forth in this section cannot be met, then structural modifications may be submitted for approval of the director of Public Works and VDOT.
Deletes metric references Cite state and federal requirements	702.20 Major Culverts: A. Major culverts shall be designed in accordance with VDOT standards. B. A pipe culvert may be used where drainage requirements call for an opening of thirty-six (36) square feet (3.35 square meters) or less. C. A box culvert, a standard span, or a specially designed bridge shall be used where drainage requirements call for an opening over fifty (50) square feet (4.65 square meters). <u>D. The installation of culverts in streams shall comply with the U.S. Army Corps of Engineers and the Virginia Department of Environmental Quality requirements to countersink the culverts, if applicable.</u>
Disallows yard inlets Deletes metric references	702.21 Storm Drainage Structures in General: A. Structures and appurtenances for inlets, curb and gutter, endwalls, junctions, etc., shall conform to the current edition of the road and bridge standards of VDOT unless approved otherwise in writing by the director of Public Works. The use of pre-cast structures from an approved manufacturer shall be in accordance with VDOT standards and specifications. B. A drainage structure shall be located at every change in line and grade and change in pipe size. Where permitted by the director of Public Works and VDOT, pipes may tie directly into box culverts. C. Where pick up of additional storm water is required, a yard inlet, curb inlet, or drop inlet shall be constructed. D. At every structure, a tenth (0.10) of a foot (31 millimeters) drop in invert is required.

Relocated from 710.00. added term jurisdictional before wetlands. Modified the requirement for situations when offsite wetlands study is needed. Identify wetlands on the plan, submit 2 extra copies of the plans if there are wetlands impacts.	sufficiently so that any subsidence that may occur shall not be objectionable nor detrimental to normal use. D. Backfill and replacement work in existing or proposed roads to be accepted into the VDOT system shall be executed in accordance with all applicable VDOT standards. All surplus materials shall be disposed in approved areas. 704.08 Grading within Jurisdictional Wetlands The site and subdivision plans must clearly show the streams, ponds, and jurisdictional wetlands areas on the project parcel(s). Any proposed impacts to the wetlands and the stream, including the impacts associated with stream crossings must be clearly shown on the plans. The wetlands and the wetlands impact shall also be identified on the plan by type, such as forested, shrub-scrub, emergent, etc. If the project proposes wetlands/stream disturbance, the developer shall submit a wetlands permit application and plan to the state and federal agencies for review. It must be submitted prior to or concurrently with the preliminary plan, however, if a preliminary plan is not required it cannot be submitted any later than the first final plan submission to the County. The County will also require two additional plan sets to address the wetlands impacts in accordance with the County's "Administrative Procedures for the Management of the Site Development Plan Process". In certain situations, the director of Public Works may require the developer to study the wetlands in adjoining properties within 100 feet of the boundary lines.
Deletes metric references	710.00 GRADING - POLICY 710.01 General Policy for Grading and Clearing: A. Generally, grading within the following areas should be avoided: (1) Wooded slopes equal to or greater than twenty-five percent (25%) and having a continuous area of ten thousand (10,000) square feet (929 square meters) or greater. (2) Wooded one hundred (100) year floodplain. (3) Wooded slopes equal to or greater than fifteen percent (15%) adjacent to a stream. B. Slopes steeper than three to one (3:1) are generally not acceptable, unless the existing grades are already in excess of three to one (3:1), or tying out steeper slopes to existing grades is required to preserve woodland areas that are to remain undisturbed. These preserved woodland areas must be in

Repetition of language from Zoning Ordinance This provision is added to be consistent with Zoning Ordinance.	<u>F. The plan shall clearly delineate and show the areas that are highly erodible, highly permeable, and/or marine clay on slopes greater than 15 percent that may be disturbed only if mitigation measures are approved and used in accordance with the requirements of DCSM.</u> <u>G. The plan shall also clearly delineate and show the areas with slopes 25 percent and greater. These areas shall not be disturbed unless mitigation measures are used to preclude adverse impacts.</u> <u>H. Wooded slopes 25 percent and greater that abut perennial streams and have a contiguous area of 10,000 square feet or greater shall be clearly shown on the plans as conservation areas. These slopes shall not be disturbed before, during or after development, except for the installation of utilities and road crossings as approved on a site or subdivision plan. Exceptions to the requirement to establish conservation areas may be considered by the Zoning Administrator in accordance with the provisions in the Zoning Ordinance.</u> <u>I. The site-specific mitigation measures proposed by the engineer will be reviewed by the director of Public Works.</u>
Deletes metric references Deletes metric references	712.02 Lot Grading Plan Elements: A. The following items shall be provided and indicated on grading plans for residential development: (1) Scale of one (1) inch equals thirty (30) feet (metric 1:250) or less for lots with areas less than one (1) acre (0.4047 hectare). A scale of up to one (1) inch equals fifty (50) feet (metric 1:500) shall be allowed for lots with areas of one (1) (0.4047 hectare) or greater. (2) Legend in accordance with Table 7-4. (3) Contours at two (2) foot (0.5 meter) intervals defining the lot grading. All contours and spot elevations shall be referred to USGS datum and certified by the professional who prepares the plan. The five (5) foot contour topographic maps prepared by the County may be used to prepare individual lot grading plans for lots which were not platted and approved as part of a subdivision, provided that: (1) the lots are greater than two (2) acres, and (2) the limits of clearing and grading are no less than fifty (50) feet from any property line. Any information prepared by others shall be verified to be reasonably accurate at the time the plans are submitted for review. (4) Only for individual lots, distances from structures to the property lines, building restriction lines, and other proposed changes.

Minor edit	Developers are encouraged to discuss with the Department of Public Works the possibility of participating in the construction of a regional SWM facility and to share in the benefits of larger facilities downstream. The Department of Public Works shall provide guidelines for the design, construction, and maintenance of such facilities. The County's objectives for regional SWM facilities are as follows: (1) To encourage a regional approach to storm water detention, rather than numerous small and marginally effective individual on-site ponds; (2) To facilitate the implementation of the regional SWM ponds through the development process; and (3) To reduce the impact on the environment by encouraging the use of nonstructural BMPs, biofilters and sediment forebays. If a regional facility is under construction or funded and scheduled for construction, the properties within the service area of the facility shall be required to participate in the implementation of the regional pond and pay a pro rata share. C. The Department of Public Works reserves the right to disapprove certain types of SWM and BMP systems for certain types of development, if there are documented concerns regarding the effectiveness or maintainability of these systems. D. The Department of Public Works reserves the right to ask for a pro rata share contribution for certain sites, in lieu of providing onsite storm water management facilities, based on watershed conditions, as stated in Section 720.06.A. of this manual.
Promote LID	E. For SWM design purposes, all pervious lands in the site shall be assumed prior to development in good hydrologic condition regardless of the conditions existing at the time of computation. Hydrologic condition is used in describing non-urbanized lands such as woods, brush, meadow, agricultural lands, and open spaces associated with urban areas, such as lawns, parks, golf courses and cemeteries. F. If SWM facilities that rely on infiltration into underlying soils are proposed, the engineer shall ascertain that the soils are suitable.
	720.02 General Policy for BMP and Storm Water Quality: A. All development or redevelopment occurring within the County shall incorporate water quality measures (best management practices). A minimum of twenty percent (20%) phosphorus removal shall be provided for redevelopment sites. The current edition of the Northern Virginia BMP Handbook, prepared by the

Allow using DCR SWM Handbook. Use of other BMP techniques Encourage the use of infiltration devices. No BMP conservation areas in lots less than 20,000 square feet. Conservation area credits	Northern Virginia Planning District Commission (NVPDC), and/or Virginia Storm Water Management Handbook shall be used in the design and review of BMP facilities. Innovative and alternative water quality BMPs may be allowed for land development at the discretion of the Director of Public Works, subject to pollutant removal efficiencies recognized by the Virginia Department of Conservation and Recreation. B. The use of environmentally sensitive design techniques often referred to as low impact development that incorporate infiltration and ground water recharge as well as the replication of predevelopment volume, runoff rates and times of concentration is encouraged as an alternative to the ponds and other more common SWM/BMP devices. Guidelines published by the Department of Public Works (appendix C) shall be used when low impact development techniques are used. Design procedures developed by jurisdictions within the Metropolitan Washington Area may also be used in the design and review of these facilities. C. Residential lots 20,000 square feet or smaller shall not be platted with tree save areas credited towards satisfying BMP requirements (BMP conservation areas). D. For all other residential lots, trees save area credited towards satisfying BMP requirements may be platted within individual lots, if setback a minimum distance of 30 feet from the principal structure. BMP conservation areas shall be delineated on the plan and plat with a note "BMP Conservation Area, no use or disturbance of the area is permitted without the written approval of the Director of Public Works".
Deletes metric references	720.03 Exemptions: Development exemptions from Prince William County SWM plan submission requirements (refer to Section 720.05 of this manual for waiver of BMP) are as follows: A. Minor land disturbing activity involving less than five hundred (500) cubic yards (382.28 cubic meters) of earthwork and less than two thousand five hundred (2,500) square feet (232.26 square meters) of disturbed area, which is promptly stabilized to prevent erosion and sedimentation, not including creation of paved or other impervious surfaces. B. Accepted agricultural and management practices permitted by the Zoning Ordinance and/or in accordance with an approved siltation and erosion control plan. Examples of such practices in an agricultural zoning district are plowing, nursery operations, such as the removal or transplanting

	performed under the direction of registered professionals.
Golf courses require maintenance agreements There is no certification for reports.	720.16 County Maintained SWM/BMP Facilities: A. County maintained SWM/BMP facilities shall be inspected and maintained by the Department of Public Works. Easements shall be dedicated to public use during the land development process. Drainage easements are required for the maintenance of storm sewer systems, open channels as defined by the Virginia Erosion and Sediment Control Handbook, improved drainageways of increased concentrated runoff, and for facilities where required by this section. B. Access easements and driveways are necessary for emergency public access to maintain a drainage way or a storm drainage system located on private property. Furthermore, drainage easements are intended to restrict disturbance of land in the easement which would detrimentally alter the drainage way. C. Prior to the County performing maintenance or repair on SWM/BMP and drainage facilities, the property owner will be required to enter into an agreement with the County which will hold harmless the County and its agents and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the County for the repair or maintenance of the SWM/BMP or drainage facilities. 720.17 Golf Courses: A. Prior to the issuance of site development permits, owners of the golf courses, new or expanded, shall be required to execute an agreement. This agreement is designed to give the County the authority to ensure that a nutrient management and an integrated pest management (IPM) plans (water quality agreements) are developed for the golf course within one year following the construction of the golf course. B. Reports to document the implementation of the nutrient management and IPM plan, in accordance with the executed water quality agreements, shall be forwarded to the Department of Public Works before June 30th of each year.
	721.00 SWM/BMP FACILITIES - PLANNING AND DESIGN 721.01 Facilities Design in General:

Allow use of DCR SWM handbook for SWM design	A. Storm water management (SWM) addresses the quantity of runoff while best management practices (BMP) addresses the quality of runoff. While there are differences between performance criteria, the two management strategies will often be employed within the same structure or facility. Standards which apply to one set of performance criteria shall not lessen the performance criteria for the other. B. (1) If both SWM and BMP are provided within the same facility, the final design shall ensure that the performance criteria and maintenance are compatible. <u>Reference to SWM may also imply BMP (but not necessarily).</u> (2) The engineer may use the “Virginia Storm Water Management Handbook” as a supplement to DCSM for the design of SWM facilities <u>subject to approval from the Director of Public Works.</u> C. An acceptable SWM plan can be obtained by the following measures: (1) Providing the necessary facilities within the project area. (2) Entering into a joint effort with other developers to provide multisite facilities. (3) Entering into an agreement with the County, subject to prior approval by the Department of Public Works for a financial contribution for off-site SWM. Such contributions shall be held by the County and used only for SWM facilities within the major drainage basin wherein the developer's project is located. The County may choose to construct such facilities, or may use the contributions to reimburse developers who provide SWM facilities in excess of their own needs. (4) Granting an easement or dedicating land for a larger SWM facility, subject to prior approval by the Department of Public Works, in lieu of the required on-site SWM. (5) When the County determines that additional storage capacity (beyond that required by the applicant for on-site SWM) is necessary, it may acquire from the applicant or owner, by purchase or dedication, additional land as may be necessary, and/or participate financially in the construction of the SWM facility to the extent that it exceeds the required on-site SWM. (6) Participation in a regional SWM facility.
	721.02 Design Criteria for SWM/BMP Facilities: A. Peak flows and rainfall frequencies and durations shall be

Proper section reference	the principal outlet structure is inoperative. Dam design shall be performed in conformance with Section 708.04 <u>721.07</u> of this manual.
Clarify the need for anti-vortex device	I. Where required, the use of anti-vortex devices and trash racks shall be included in the design of the principal spillway. Possible flotation of the outlet devices and structures shall <u>be avoided</u> also be considered.
Provides reference material for BMPs	J. Pollution loads shall be determined by calculation methods set forth in the Northern Virginia BMP Handbook. Where required, BMP facilities shall be designed to reduce projected phosphorus runoff resulting from site development by at least fifty percent (50%). Phosphorus removal efficiencies for the different types of BMP systems are included in the Northern Virginia BMP Handbook. Where a method or facility without an efficiency rating is proposed, the designer shall be required to adequately substantiate the ratings before the design is approved. <u>The Virginia Storm Water Management Handbook, as amended, may be used as reference to supplement the information provided in the Northern Virginia BMP Handbook.</u>
Measures to prevent stagnant water in dry ponds.	K. Concrete trickle ditches shall not be allowed in SWM facilities, unless a continuous low flow exists. <u>To ensure positive drainage, dry ponds shall have a minimum slope of 2% (two percent). The SWM facilities shall be designed to minimize standing water beyond the design detention time to prevent the problems associated with the propagation of insects, particularly mosquitoes.</u> L. The following methods are considered acceptable to achieve the pollution load objectives of this section: (1) Structural measures that store storm water and rely upon solid settling processes to remove pollutants. Minor modifications could practically convert a storm water detention facility to a multipurpose facility, satisfying both water quality and quantity needs. Extended detention ponds and wet ponds are examples of acceptable structural measures. (2) Volume control BMP, such as porous pavement, sand filters, modular pavement, and infiltration pits or trenches (when the soil permeability allows) or nonstructural BMPs such as bioretention practices, vegetated swales, etc. (3) Entering into a joint agreement with other developers to provide appropriate multisite facilities. (4) Entering into an agreement with the County, subject to prior approval by the director of Public Works, which provides for a financial contribution for off-site SWM and BMP. Such contributions shall be held by the County and used only for SWM and BMP facilities within the major

Change from floodplain to ponding limits. RPA restrictions Staff disagrees with committee's recommendation and maintains the same position regarding wetlands location within the SWM facility.	attached developments, SWM and BMP facilities shall be located within easements in lots which will be conveyed to and maintained by a homeowners' association. In the absence of a homeowners' association, SWM and BMP facilities may be located in individual lots, provided that the minimum lot area required is met outside the area devoted to the SWM and BMP facilities and floodplains. The area devoted to storm drainage systems (including SWM and BMP) shall not exceed twenty percent (20%) of the total area of the lot. F. SWM and BMP facilities shall not be located within individual single-family attached lots. G. Nonregional SWM facilities shall not be located within identified special flood hazard areas delineated in the County's FIRM. H. SWM and BMP setback areas shall be stabilized and landscaped, provided access easements remain clear in accordance with Section <u>721.05 and 800</u> of this manual. I. All measured distances of setbacks mentioned above shall be to the one hundred (100) year <u>floodplain-ponding limits</u>. J. SWM and BMP facilities shall not be located within Resource Protection Areas except as allowed or in conformance with Section 740. K. SWM Facilities shall not be designed and constructed to include <u>jurisdictional wetlands, unless the wetland disturbance has been authorized by the state and federal agencies.</u>
Deletes metric references	721.04 Easements for SWM/BMP Facilities: A. An easement around the SWM/BMP facility shall be required. B. SWM and BMP facility easements shall be provided to adequately contain the one hundred (100) year ponding level (plus required freeboard), embankment, outlet structures, and an appropriate width of maintenance area around the one hundred (100) year ponding area that permits access to the dam, outlet structures, and embankment. C. For infiltration trenches and other underground systems, the easement shall include a ten (10) foot (3.05 meters) wide strip outside the edges of the structure. This width will be increased one (1) foot (300 millimeters) for each foot that the depth of structure exceeds six (6) feet (1.83 meters).

Construction of utilities to comply with federal and state requirements	submissions and approvals otherwise required under section 740: A. Water wells, passive recreation facilities such as boardwalks, trails, and pathways and historic preservation and archaeological activities. B. Construction, installation, operation and maintenance of electric, natural gas, fiber optic and telephone transmission lines, railroads, public roads and their appurtenant structures so long as they comply with Erosion & Sediment Control regulations and the Stormwater Management (SWM) Act of the Code of Virginia. The exemption of public roads is further conditioned on the road alignment and design being such as to minimize encroachment into the RPA and adverse effects on water quality is minimized. C. Construction, installation and maintenance of water and sanitary sewer lines and storm sewer system outfalls as permitted by Prince William County provided that: (1) To the degree possible, the location of such utilities should be outside RPA. (2) No more land shall be disturbed than is necessary to provide the necessary utility installation. (3) The construction, installation and maintenance of such utilities and facilities shall comply with all applicable state and federal permits and designed and conducted in a manner that protects water quality. (4) Any disturbance exceeding 2,500 feet shall comply with Erosion & Sediment Control requirements. 740.05 Permitted Uses in Resource Protection Areas: The following uses will be allowed in the RPA with the submission of a Water Quality Impact Assessment (WQIA): A. Water dependent facilities, new or expanded. Access to the water dependent facility will be provided with the minimum necessary disturbance to the RPA, where practicable, a single point of access will be provided. Any non- water dependant component such as, but not limited to parking, shall be located outside RPA. B. Development or redevelopment within the designated Intensely Developed Area (IDA) C. Regional SWM facility as defined in section 741.03.
Single Access to water dependent use thru RPA	740.06 Exceptions for Encroachments into the RPA: Any proposed encroachment into the RPA area which is not exempt under section

Exception to encroach shall not degrade water quality Reference for exception request	740.04 or permitted under section 740.05 of this manual shall submit a request for an exception in writing to the Director of Public Works. This request shall identify the impacts of the proposed exception on water quality and on lands within the RPA through the performance of a Water Quality Impact Assessment (WQIA) which complies with the provisions of section 742.05. An exception may be granted with such conditions and safeguards as deemed necessary to further the purpose and intent of Part 504 of Chapter 32 of the Prince William County Code and this section, provided that it is found that: (1) Granting the exception will not confer upon the applicant any special privileges that are denied to other property owners in the CBPA overlay district. (2) The exception request is not based on conditions or circumstance that are self-created or self-imposed, nor does the request arise from conditions or circumstances either permitted or nonconforming that are related to adjacent parcels. (3) The exception requested is the minimum necessary to afford relief. (4) The exception request will be consistent with the purpose and intent of the overlay district, and not injurious to the neighborhood or otherwise detrimental to the public welfare or water quality. (5) Reasonable and appropriate conditions are imposed which will prevent the exception request from causing a degradation of water quality. (6) The exception request shall conform to the requirements in Section 741.01. A. Administrative exception: The Director of Public Works shall review the request for an exception and associated WQIA and may grant an administrative exception with such conditions and safeguards as deemed necessary to further the purpose of this section of the manual. An administrative exception will be considered in the following situations: (1) Lots lawfully recorded prior to November 27, 1990 when the application of the RPA would result in the loss of buildable area, provided that: (a) Encroachments into the <u>RPA</u> shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities; accessory structures shall not be allowed if their
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Mitigation with vegetation even for RPA encroachments in pre- Ches Bay recorded lots.	construction will further reduce the RPA width. (b) Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of buffer encroachment, and is equal to the area of encroachment into the buffer area, shall be established elsewhere on the lot or parcel. Where possible, an area equal to the area encroaching the RPA, shall be established elsewhere on the lot or parcel in a way to maximize water quality protection.
Reworded	(c) In no case shall The encroachment into the RPA area shall not be greater than fifty (50) feet in width unless the encroachment is authorized by the Chesapeake Bay Preservation Area Review Board. (d) Where the necessary encroachment in the RPA is greater than 50 feet, such exception may be granted only following a public hearing conducted by the Chesapeake Bay Preservation Area Review Board. (2) Lots lawfully recorded between November 27, 1990 and March 1, 2002 which meet conditions 740.06A1a through 740.06A1c as listed above and the additional following conditions: (a) Conditions or mitigation measures imposed through a previously approved exception shall be met. (b) If the use of a best management practice was previously required, the BMP shall be evaluated to determine if it continues to function effectively and if necessary, the BMP shall be reestablished or repaired and maintained as required. (3) A private road or driveway crossing provided it satisfies specific conditions imposed by the Department of Public Works. (4) Lots for which encroachment into RPA is necessary to install septic drainfields and where no alternate percolation sites are available as verified by the Health Department. (5) Expansion of a non-conforming principal structure for minor alteration in conformance with Section 601.33 of the Zoning Ordinance. <u>Expansion of any non-conforming accessory structure within RPA that proposes additional RPA disturbance shall be handled as an exception requiring a public hearing in conformance with Section 740.06 (C).</u>
Public Hearing for expansion of accessory structures	B. If the administrative exception request is denied, the Director of Public Works shall provide the rationale for the decision to the applicant. The applicant may then appeal the decision to the Chesapeake Bay Preservation

	Area Review Board, within 30 days of denial. C. Exceptions requiring a Public Hearing - The Director of Public Works shall review and forward its recommendation on all other exception requests, with accompanying WQIA, to the Chesapeake Bay Preservation Area Review Board for consideration and action following a public hearing. D. The Chesapeake Bay Preservation Area Review Board shall conduct a public hearing to review the request for an exception and the WQIA and may grant the exception with such conditions and safeguards as deemed necessary to further the purpose and intent of Part 504 of Chapter 32 of the Prince William County Code and this section. E. If the exception request is denied, the Chesapeake Bay Preservation Area Review Board shall provide its written findings and rationale for the decision to the applicant. . The decision of the Board is final and can be appealed by the applicant to the Circuit Court within 30 days of the denial. 741.00 CHESAPEAKE BAY PRESERVATION AREA – PLANNING AND DESIGN 741.01 General Performance Standards: A. Land disturbance shall be limited to the area necessary to provide for the proposed use or development and shall comply with the following: (1) The proposed limits of disturbance shall be clearly shown on all plans. The limits shown on the approved plans shall be physically marked and protected on the development site. (2) No construction access should be permitted through an RPA unless specifically approved by the Director of Public Works. B. Indigenous vegetation shall be preserved to the maximum extent possible, consistent with the use and development proposed and in accordance with the Virginia Erosion and Sediment Control Handbook. All development or redevelopment shall conform to the requirements of Section 800.00 of this manual. Site design shall preserve existing tree cover to the greatest extent feasible. Diseased trees or trees weakened by age, storm, fire, or other injury may be selectively removed in accordance with the requirements of Section 800.00 of this manual. C. Land development shall minimize impervious cover to promote infiltration of storm water into the ground consistent with the proposed use or
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Approval required for any RPA disturbance	development, in accordance with Section 721.00 of this manual. D. Any land disturbing activity cumulatively exceeding two thousand five hundred (2,500) square feet, including construction of single-family houses, shall comply with the requirements of Section 751.00 of this manual. <u>Any disturbance within RPA, regardless of the size, requires a formal-written approval from the County.</u> E. All on-site sewage disposal systems not requiring an NPDES permit shall be pumped out at least once every five (5) years, in accordance with the provisions of Chapter 23 of the Prince William County Code. F. A reserve sewage disposal site with a capacity at least equal to that of the primary sewage disposal site shall be provided in accordance with the requirement of Section 500.00 of this manual. G. For any use or development, including redevelopment, storm water runoff shall be controlled by the use of best management practices in accordance with Section 721.00 of this manual. H. Prior to initiating grading or other on-site activities on any portion of a lot or parcel, all wetland permits required by federal, state, and local laws and regulations shall have been obtained and evidence of such submitted to the Director of Public Works. 741.02 Additional Performance Criteria for RPA A. To minimize the adverse effects of human activities on the other components of RPA, state waters, and aquatic life, a one hundred (100) foot buffer area of vegetation that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff shall be retained if present and established where it does not exist adjacent to water bodies with perennial flow. B. In accordance with the regulations of this section, the one hundred (100) foot RPA buffer area of natural or established vegetation is deemed to achieve a forty percent (40%) reduction of nutrients provided that runoff is conveyed by sheet flow through the buffer area. C. In order to maintain the functional value of the RPA buffer area, indigenous vegetation may be removed subject to written approval by the Director of Public Works or approval of a plan to provide reasonable access paths, sight lines, general woodlot management, and best management practices, including those that prevent upland erosion and concentrated storm water flows, as follows:
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(1) Trees may be pruned or removed as necessary to provide for sight lines and vistas provided that where removed, they shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion and filtering nonpoint source pollution from runoff.

(2) Where indigenous vegetation is removed to create passive recreation trails, the path shall be constructed and surfaced so as to effectively control erosion.

(3) Dead, diseased, or dying trees or shrubbery and noxious weeds may be removed and thinning of trees may be conducted based upon the best available technical information in conformance with section ~~802.33~~ 800 of this manual and pursuant to sound horticultural practice as determined by the Director of Public Works.

(4) Where areas to be preserved in RPA, as designated on an approved site, subdivision or lot grading plan, are encroached upon, replacement of existing trees and other vegetation will be achieved in accordance with a site specific RPA restoration plan approved by the Director of Public Works.

(5) For shoreline erosion control projects, trees, and woody vegetation may be removed, necessary control techniques employed, and appropriate vegetation established to protect or stabilize the shoreline in accordance with the best available technical advice and applicable permit conditions or requirements.

D. Where land uses such as agriculture or silviculture within the area of the buffer cease, and the land is proposed to be converted to other uses, the full 100-foot buffer area shall be reestablished. In reestablishing the buffer, management measures shall be undertaken to provide woody vegetation that assures the buffer functions as set forth in the Chesapeake Bay Regulations. (9VAC10-20-130)

741.03 RPA Buffers in Intensely Developed Areas (IDA): Development and redevelopment within intensely developed areas (IDA) and IDA infill shall be exempt from the provisions of Section 741.02, but only in accordance with the following:

A. The proposed development or redevelopment is permitted under the provisions of Part 601 of Chapter 32 of the Prince William County Code and Section 740.07 of this manual, as applicable.

B. Any proposed development or redevelopment shall not increase the areas of disturbed RPA, exclusive of RPA buffers, unless such disturbance is

Relocated; Generated much discussion. Staff believe that this requirement is necessary. Setback requirement for non-RPA wetlands Protect wetlands in individual lots Reflects current policy.	otherwise permitted by and consistent with the requirements of Part 504 of Chapter 32 of the Prince William County Code and all applicable requirements of this manual. C. Development or redevelopment shall meet all RPA buffer standards established in Section 741.02, except that encroachment due to redevelopment may occur within the full width of the buffer. . D. Notwithstanding the provisions of subparagraphs A, B, and C above, the RPA buffer shall be established to the extent feasible consistent with the proposed development of redevelopment of the site. E. All other requirements of this manual, the Prince William County Code and other applicable laws are met. 741.04 Minimum Lot Size in Relation to RPA: A. All residential lots, of 20,000 square feet or less, shall not be platted incorporating land within an RPA, irrespective of zoning designation. B. For all other residential lots, RPA land may be incorporated within the lots , when the following criteria are met: (1) Lots must have 20,000 square feet or more outside of the RPA. (2) All minimum required yard, setbacks and other applicable development standards have been met and shown on the plats. (3) A minimum distance of fifty (50) feet shall be between the principal structure, and any attachments thereto, and the RPA. C. For lots two (2) acres or greater in size, RPA acreage may be used to calculate minimum lot size, provided that sufficient acreage lies outside that portion of the lot zoned RPA to permit reasonable use and enjoyment of any proposed use not permitted in the RPA. <u>D. Residential lots 20,000 square feet or smaller shall not be platted with jurisdictional wetlands. In addition and regardless of lot size the dwellings shall be at least forty (40) feet away from the wetlands that are not associated with RPA's.</u> 741.05 Special Provisions for SWM Facilities:
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Define regional SWM facilities and when they are allowed in RPA. Design standards for such facilities and other requirements.

The SWM facilities, in general, must be located outside of RPAs. The SWM facilities may be allowed within RPAs under the following circumstances, subject to approval by the Chesapeake Bay Preservation Area Review Board:

A. Regional storm water management facilities, part of an approved watershed management plan or as hereafter provided, may be located in the RPA, provided that one of the following criteria ~~are~~-is met:

(1) They are part of an overall watershed storm-water management plan which considers environmentally sensitive features and minimizes negative impacts on them. Where possible, plans must locate facilities outside of RPAs.

(2) A water quality impact assessment is required for each SWM facility in RPA

(2) The SWM facility provides controls for a drainage area of 100 acres or more. The SWM facilities designed to provide BMP controls for offsite drainage areas, particularly those offsite drainage areas developed without BMP controls are encouraged.

(3) If the regional SWM facility is offsite, its location shall be in conformance with the Zoning Ordinance.

(3) . All performance criteria must be met, including wetlands permits, locating nonwater-dependent elements outside of RPAs, and minimum vegetative removal and access disturbances.

(4) In certain situations, the Director of Public Works may consider a SWM facility as regional, when the facility provides for the conservation and reuse of storm water runoff.

B. A water quality impact assessment is required for each SWM facility in RPA.

C. All performance criteria must be met, including wetlands permits, locating nonwater-dependent elements outside of RPAs, and minimum vegetative removal and access disturbances.

B. — Until such time as the watershed in which the development is located is the subject of an approved watershed plan, the Director of Public Works may permit on-site storm water management facilities to be located in the RPA that, in general, serve drainage areas that exceed one hundred (100) acres in size and otherwise conform to the criteria set out in this section.

Not necessary

Drainage area with PFD Detailed PFD for streams with 50 acre or more drainage area	742.00 CHESAPEAKE BAY PRESERVATION AREA - SUBMISSION REQUIREMENTS 742.01 CBPA Overlay District: In addition to the requirements of chapters 25 and 32 of the Prince William County Code, the applicant shall submit the following prior to any development or redevelopment of lands within Chesapeake Bay preservation areas: A. Perennial Flow Determination in accordance with section 742.02 of this manual. B. Preservation Area Site Assessment (PASA), in accordance with Section 742.03 of this manual, as applicable. . C. Water Quality Impact Assessment (WQIA) study, in accordance with sections 742.04 and 742.05 of this manual, as applicable. D. RMA limits study, if desired, in accordance with the provisions of Section 742.06 of this manual, as applicable. E. Studies or plans as required by all applicable sections of this Design and Construction Manual. (Landscaping plan, Stormwater Management plan, E&S control plan, etc.) 742.02 Perennial Flow Determinations: A reliable, site-specific determination shall be conducted to determine whether water bodies within the development site have perennial flow. Such determination will be made using a scientifically valid system of in-field indicators acceptable to the Director of Public Works. <u>The engineer must provide the drainage area for every stream for which a perennial flow determination study is submitted.</u> A. <u>If water bodies exist on the development site and have a drainage area greater than 400 50 acres, a perennial flow determination study shall be submitted before or concurrently with the submission of a rezoning or a special use permit application, a preliminary, subdivision or a site plan, whichever occurs first. This determination shall identify all perennial streams located on the proposed development site using a method approved by the Director of Public Works.</u> B. <u>If water bodies exist on the development site and have a drainage area less than 400 50 acres, a perennial flow determination can be limited to a modified flow determination study of less detail which is acceptable to the Director of Public Works. This simplified perennial stream</u>
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documentation can be in the form of field notes, observed flow conditions, photos with short narrative or survey or other relevant observations. The dated pictures taken during field visit shall be submitted to the County. C. The Director of Public Works may require a detailed perennial flow determination for water bodies on the development site with a drainage areas less than 100 50 acres under unique circumstances where field data is available from the Department of Public Works. D. For development sites containing Resource Protection Areas (RPAs) as mapped on the County’s Chesapeake Bay Preservation Area Overlay District Map, the Director of Public Works may allow the applicant to use the Overlay Map as a representation of perennial flow for all water bodies mapped as RPA. However, the applicant is still required to determine the RPA width with site specific investigation and provide the 100-foot RPA buffer. The applicant is still also required to establish whether all other water bodies within the development site not mapped as RPA exhibit perennial flow through site-specific determination. E. If there are no water bodies on the site, as documented by digital pictures, topography, and other pertinent findings, the Director of Public Works will not require a perennial flow determination study. The engineer/land surveyor must submit a statement or certification to justify that the study is not required. 742.03 Preservation Area Site Assessment (PASA): A. A Preservation Area Site Assessment (PASA) shall be submitted for any proposed development site where RPA is located on the site based on Chesapeake Bay Preservation Area Overlay maps or on Perennial Flow Determination. This PASA shall be submitted to delineate the extent of wetlands on the site and to define RPA boundaries. The PASA shall be submitted in conjunction with a rezoning or special use permit application, preliminary subdivision plan or first plan submission and, once approved, shall be considered valid for 5 years from approval date, or as long as the final site plan remains valid. B. A PASA study submission shall include a narrative report and associated plans which detail the field investigation done at the site to determine the extent of wetlands on the site at the time of investigation. C. Wetland delineation shall be performed during field investigation of PASA and shall be in accordance with the United States Army Corps of Engineers “Wetlands Delineation Manual, Technical Report Y-87-1, January	documentation can be in the form of field notes, observed flow conditions, photos with short narrative or survey or other relevant observations. The dated pictures taken during field visit shall be submitted to the County. C. The Director of Public Works may require a detailed perennial flow determination for water bodies on the development site with a drainage areas less than 100 50 acres under unique circumstances where field data is available from the Department of Public Works. D. For development sites containing Resource Protection Areas (RPAs) as mapped on the County’s Chesapeake Bay Preservation Area Overlay District Map, the Director of Public Works may allow the applicant to use the Overlay Map as a representation of perennial flow for all water bodies mapped as RPA. However, the applicant is still required to determine the RPA width with site specific investigation and provide the 100-foot RPA buffer. The applicant is still also required to establish whether all other water bodies within the development site not mapped as RPA exhibit perennial flow through site-specific determination. E. 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A PASA study submission shall include a narrative report and associated plans which detail the field investigation done at the site to determine the extent of wetlands on the site at the time of investigation. C. Wetland delineation shall be performed during field investigation of PASA and shall be in accordance with the United States Army Corps of Engineers “Wetlands Delineation Manual, Technical Report Y-87-1, January
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Clarification	1987, Final Report (Federal Manual) or latest effective edition. D. The PASA shall clearly delineate RPA boundaries as defined in section 740.03 of this manual. E. The PASA shall be drawn at the same scale as the preliminary site plan or subdivision plan, and plans shall be certified as complete and accurate by a <u>licensed</u> professional engineer, or a licensed <u>3-B</u> land surveyor. F. Upon the submission by an applicant of the Preservation Area Site Assessment, the Department of Public Works shall verify the accuracy of and, may render adjustments to the boundary delineation shown therein. 742.04 Water Quality Impact Assessment: A Water Quality Impact Assessment (WQIA) is required for any proposed development in RPA or as determined by the Director of Public Works, based on the unique characteristics of the site or intensity of the proposed use or development. A. The purpose of the WQIA is as follows: (1) Identify the impacts of proposed development on water quality and lands within RPAs and other environmentally sensitive lands that have the potential to significantly affect water quality. (2) Ensure that, where development does take place within RPAs and other sensitive lands, it will be located on those portions of a site and in a manner that will be least disruptive to the natural functions of RPAs and other sensitive lands important to the natural functioning of RPA lands, consistent with the goals and objectives of the Chesapeake Bay Preservation Act, the regulations of Part 504 of Chapter 32 of the Prince William County Code, and this section of the manual. B. The submission of a modified WQIA may be accepted by the Director of Public Works in conjunction with the processing of exceptions as identified in section 740.06A. C. All information required for a WQIA in this section shall be certified as complete and accurate by a licensed professional engineer or a licensed 3-B land surveyor. D. Upon the completed review of a water quality impact assessment, the Department of Public Works will determine if the proposed development is consistent with the purpose and intent of Part 504 of Chapter 32 of the Prince William County Code and this section and make a finding based upon the following criteria:
Clarification.	