

CHAPTER 6

CHESAPEAKE BAY PRESERVATION AREAS AND STREAM PROTECTION AREAS

6.1 INTRODUCTION

Virginia's Chesapeake Bay Preservation Area (CBPA) Designation and Management Regulations (9VAC25-830 et seq.) require local governments to implement ordinances designed to protect and restore the quality of perennial streams and their associated tidal and/or non-tidal wetlands, as the conditions in these environments have been determined to directly affect the condition of the Chesapeake Bay. The County's requirements related to these environmental features are found in Sec. 24-106.3 of the Henrico County Code. Chesapeake Bay Preservation Areas include Resource Protection Areas and Resource Management Areas. In addition, the County also provides protection of intermittent streams with greater than 100 acres of drainage in the form of the Stream Protection Area (SPA).

6.2 APPLICABILITY

In accordance with section 10-29 of the Henrico County Code, the requirements of this chapter apply to all regulated land-disturbing activities described in Chapter 3. For help determining the land disturbance activity type, please refer to Chapter 3 of this Manual.

6.3 DESIGNATIONS

6.3.1 RESOURCE PROTECTION AREAS

Resource Protection Areas (RPAs) are the component of the Chesapeake Bay Preservation Area comprised of sensitive lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts which may result in significant degradation to the quality of state waters.

In their natural condition, RPAs provide for the removal, reduction or assimilation of sediments, nutrients and potentially harmful or toxic substances in runoff entering the bay and its tributaries and minimize the adverse effects of human activities on state waters and aquatic resources. The RPA shall consist of:

- a. Tidal wetlands.

- b. Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow.
- c. Tidal shores.
- d. Such other lands which the board of supervisors may designate by ordinance to provide the benefits which are necessary to protect the quality of state waters; and
- e. A vegetated buffer area no less than 100 feet in width located adjacent to and landward of the components listed in subsections a. through d. above, and along both sides of any water body with perennial flow. The full buffer area shall be designated as the landward component of the RPA notwithstanding the presence of permitted uses, encroachments, and permitted vegetation clearing in compliance with section 24-106.3(f) and (g) of the Henrico County Code.

Designation of these components must be based on reliable, site-specific information and site-specific determinations must be confirmed by the Administrator.

6.3.2 RESOURCE MANAGEMENT AREAS

Resource Management Areas (RMAs) include land types that, if improperly used or developed, have a potential for causing significant water quality degradation or for diminishing the functional value of the RPA.

RMAs shall be provided contiguous to the entire inland boundary of the RPA. Where mapping indicates the presence of the following land types contiguous to RPAs, the following shall be classified as an RMA:

- a. All areas specifically designated as RMAs by ordinance by the board of supervisors because of their potential effect on water quality;
- b. Base flood hazard areas (100-year floodplains)
- c. Highly erodible soils, including steep slopes.
- d. Highly permeable soils.
- e. Nontidal wetlands not included in RPAs; and
- f. Where the land contiguous to RPAs is not an RMA as defined above, the 100 foot area contiguous to the RPA.

In lieu of delineating the individual RMA features, the applicant may designate the portion of the site that is outside of the RPA as RMA.

6.3.3 STREAM PROTECTION AREAS

Stream Protection Areas (SPAs) are the areas adjacent to both sides of an intermittent stream that extend upstream from the RPA boundary into all tributaries with a drainage

CHESAPEAKE BAY PRESERVATION AREAS AND STREAM PROTECTION AREAS

area of one-hundred (100) acres or more. The SPA is fifty (50) feet in width and is applied to each side of the stream channel. Unlike RPAs, the SPA is measured from the top of the streambank or, if the top of the streambank is not definable, is measured from the limits of the two-year storm flow or, for open waterbodies, from the water's edge. Maintenance agreements for designated SPAs (see Appendix H) must be recorded in the Clerk's Office of the Henrico County Circuit Court.

6.4 ALLOWED USES IN THE RPA AND THE SPA

Allowable activities in the RPA and the SPA shall be in conformance with Sec. 24-106.3 of the Henrico County Code and this Chapter, including submission of a water quality impact assessment in accordance with §10-39 of the Henrico County Code for approval by the director of public works/county engineer. In general, the allowable uses are limited to the following:

1. New or expanded water-dependent facilities which satisfy the following conditions:
 - a. The use does not conflict with the Comprehensive Plan;
 - b. The facility complies with the performance criteria set forth in §24-106.3(g);
 - c. Any non-water dependent components are located outside the RPA/SPA;
 - d. Access will be provided with the minimum disturbance necessary. Where possible, a single point of access will be provided; and
 - e. All other applicable requirements are met.
2. The Administrator may also authorize buffer encroachments when the requirements of the Chesapeake Bay Preservation ordinance would result in the loss of a buildable area on lots recorded prior to October 1, 1989 in accordance with the following criteria:
 - a. Encroachments into the buffer area shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities.
 - b. Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot.
 - c. The encroachment may not extend into the seaward 50 feet of the buffer area.
3. Redevelopment activities which satisfy the following conditions:

- a. The activity results in no further encroachment into the RPA/SPA, including no increase in the amount of impervious cover within the RPA;
 - b. Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot or parcel; and
 - c. All other applicable requirements, including erosion and sediment control and stormwater requirements, are met.
4. Roads and driveways may be constructed within or across the RPA/SPA provided the following conditions are met:
 - a. There are no reasonable alternatives for the alignment;
 - b. The proposal minimizes encroachment in the RPA/SPA and adverse effects on water quality;
 - c. All other applicable requirements are met; and
 - d. The proposed road or driveway is reviewed and approved through the appropriate land development process.
5. Utility lines and associated structures may be constructed within or across the RPA/SPA provided the following conditions are met:
 - a. To the degree possible, the location of such utilities should be outside of RPAs;
 - b. No more land is to be disturbed than is necessary to provide for the proposed utility installation;
 - c. All construction, installation, and maintenance of the utilities and facilities shall be in compliance with applicable state and federal permits and designed and conducted in a manner that protects water quality;
 - d. Land disturbance greater than 2,500 SF shall comply with erosion and sediment control requirements of Chapter 10 of the Henrico County Code; and
 - e. The proposed construction is reviewed and approved through the appropriate land development process.
6. Passive recreation uses such as boardwalks, trails, and pathways, provided the natural and forested characteristics of the RPA/SPA are maintained, any such activity disturbing 2,500 SF or more of land shall comply with erosion and sediment control requirements of Chapter 10 of the Henrico County Code, and approval is obtained by the director of public works/county engineer.
7. Removal of vegetation to provide reasonable sight lines, paths and general woodlot management, provided approval of the director of public works/county engineer is obtained and the following conditions are met:

- a. 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.
 - b. Any path shall be constructed and surfaced so as to effectively control erosion.
 - c. Dead, diseased or dying trees or shrubbery and noxious weeds (such as Johnson grass, kudzu, and multiflora rose) may be removed and thinning of trees may be allowed pursuant to sound horticultural practices adopted by the county.
 - d. 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.
8. Silvicultural activities, when such activities adhere to water quality protection procedures prescribed by the Virginia Department of Forestry in the most recent edition of "Forestry Best Management Practices for Water Quality in Virginia Technical Guide."
9. SWM facilities may be constructed within the landward (upper) fifteen (15) feet of the SPA provided the following conditions are met:
- a. There are no reasonable alternate locations for the SWM facility;
 - b. Land disturbance in the SPA is minimized; and
 - c. All other applicable requirements are met.
10. SWM facilities and flood control facilities may be constructed within the RPA buffer provided the following conditions are met:
- a. The SWM facility treats water from multiple development projects or from a significant portion of a watershed;
 - b. The Administrator has conclusively established that location of the facility within the RPA is the optimum location and has given approval before construction; and
 - a. All other applicable requirements are met, including compliance with the Virginia Stormwater Management Act, and all applicable state or federal permits have been obtained.
 - c. It is not the intent of this section to allow a best management practice that collects or treats runoff from only an individual lot or some portion of the lot to be located within an RPA.

6.5 PLAN REQUIREMENTS

In accordance with Sec.10-32 and Sec. 10-33 of the Henrico County Code, the following information must be clearly identified on the Environmental Compliance Plan (ECP):

CHESAPEAKE BAY PRESERVATION AREAS AND STREAM PROTECTION AREAS

1. The limits of the RPA, SPA, and RMA;
2. The location of orange safety fence or non-tearable yellow and black barricade tape for protection of the RPA, SPA, and wetlands areas, and for the allowable limits of disturbance within these areas; and
3. Wetlands, RPAs, RMAs, and SPAs, and buffers are to be flagged or otherwise identified and not disturbed unless authorized.

In addition, the following are required on all single-family subdivision ECPs submitted for approval by the Administrator:

- On all residential subdivision construction plans, lots that contain Resource Protection Areas and/or Stream Protection Areas must be identified with a single asterisk (*) and the note listed in italics below.

*Lots marked with an * have limitations for dwelling shape, size, and location. If a lot contains an RPA and/or SPA, these areas are to remain undisturbed and vegetated and are to be protected from all construction or land disturbing activities.*

- On all record plats, lots that contain Resource Protection Areas and/or Stream Protection Areas must be identified with a triple asterisk (***) and identified with the note listed in italics below.

*Lots marked with a triple asterisk (***) contain RPA and/or SPA. The buffer areas consisting of vegetation that is effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution are to be retained, remain undisturbed, and protected from all construction or land disturbing activities. Permitted activities in the RPA are restricted, and any development or disturbance in the RPA requires prior approval by the County Engineer. See construction plan on file in the Department of Planning for additional details.*

- The buildable area limits must be located to provide the following separations from the RPA/SPA (as well as wetlands to remain that are located outside of the RPA/SPA – refer to Chapter 21 for wetlands requirements):
 1. Rear yard – the separation must be greater than or equal to the rear yard setback (established by the Planning Department).
 2. Side yard – the separation must be greater than or equal to 25 feet (even if the feature is not located on the actual lot).
- “Environmental Protection Area” signs described in Section 6.10 must be shown along the boundary of the RPA/SPA (as well as wetlands to remain

that are located outside of the RPA/SPA – refer to Chapter 21 for wetlands requirements).

6.6 FIELD DETERMINATIONS

During the plan review process or during the review of a water quality impact assessment, the Administrator evaluates water bodies, nontidal wetlands, and other environmental features in the project vicinity to confirm the site-specific limits of all RPAs, RMAs, and SPAs.

6.6.1 PERENNIAL VS. INTERMITTENT STREAM DETERMINATIONS

Since 1999, Henrico County has made site-specific evaluations to determine if a stream is perennial or intermittent. Results of previous determinations are mapped in the County's GIS system. During plan review, we refer to this information and conduct additional field evaluations as needed. Consultants may also submit their own perennial vs. intermittent determinations for County review and approval. Applicants wishing to provide this additional information should reference the *Determinations of Water Bodies with Perennial Flow* guidance available from the Department of Environmental Quality and can utilize all forms currently available and approved by the Virginia Department of Environmental Quality for perennial vs. intermittent stream determinations. The Administrator will take this information into account when making a determination.

6.6.2 RPA WETLAND DETERMINATIONS

Non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow are included as Resource Protection Area features. Building permits, plans of development, and subdivision plans submitted for review must refer to the *Resource Protection Area – Nontidal Wetlands* guidance, adopted in 2007 by the Chesapeake Bay Local Assistance Board and available from the Department of Environmental Quality, for site specific determination of RPA wetland features. Wetlands included as a Resource Protection Area feature must be accurately depicted on all Plans of Development, subdivision plans, and on building permit applications so that the RPA buffer can be accurately shown as well. Documentation in the form of a wetland delineation must be submitted to the Administrator for review. If there is a conflict between where the project engineer believes the boundary of wetlands is located and where County staff believes the boundary of wetlands is located, the project engineer must get the wetland boundary confirmed by the appropriate regulatory entity.

6.7 REFORESTATION REQUIREMENTS

To minimize the adverse effects of human activities, vegetated buffer areas (RPA/SPA) that are effective in minimizing runoff, preventing erosion, and filtering non-point source pollution from runoff are required. These buffers must be retained, if present, or established where they do not exist. If these areas do not currently exist, the ECP must include appropriate replanting details that result in reestablishment of the vegetated buffer.

Where required, RPA/SPA buffers must be reforested in accordance with Minimum Design Standard 14.10 found in Chapter 14 of this Manual.

6.8 RPA EXCEPTIONS

In accordance with Chapter 24-106.3(l) of the Henrico County Code, exceptions to the RPA criteria described in this Chapter must be pursued either through an administrative (Department of Public Works) or formal (Planning Commission) process.

To determine whether an RPA exception request must follow the administrative or the formal process, the applicant must first meet with Department of Public Works Engineering and Environmental Services staff and complete a Chesapeake Bay Exception Pre-application Questionnaire. The outcome of this meeting and completion of the questionnaire will determine whether an administrative or formal request is required. In all cases where an exception to the RPA criteria is desired, a water quality impact assessment as defined in Sec. 10-39(b) of the Henrico County Code must be submitted.

6.8.1 ADMINISTRATIVE EXCEPTIONS

The Administrator may approve RPA exceptions for sections other than 24-106.3(d) *Permitted development in RPAs* and (f) *Buffer requirements in RPAs*, as follows:

- A. Remodeling, additions or alterations to principal structures that were legally in existence in RPAs on November 15, 1991 provided that:
 1. There will be no net increase in nonpoint source pollutant loads;
 2. Any development or land disturbance of 2,500 square feet or more complies with the erosion and sediment control requirements of Chapter 10 of the Henrico County Code;
 3. Additions shall be built outside RPAs where possible; and
 4. This provision does not apply to accessory structures.

- B. Buffer encroachments when the requirements of the Chesapeake Bay Preservation ordinance would result in the loss of a buildable area on lots

recorded prior to October 1, 1989 in accordance with Section 6.4.2. of this Manual.

C. In addition, when application of the RPA requirements results in the loss of a buildable area on a lot recorded between October 1, 1989 and March 1, 2002, encroachments into the buffer area may be allowed by the Administrator in accordance with the following criteria:

1. The lot or parcel was created as a result of a legal process conducted in conformity with Chapter 19 of the County Code;
2. Conditions or mitigation measures imposed through a previously approved exception are met;
3. If the use of a BMP was previously required, the BMP shall be reestablished or repaired and maintained as required;
4. Encroachments into the buffer area shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities;
5. Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot; and
6. The encroachment may not extend into the seaward 50 feet of the buffer area.

D. All administrative RPA exception requests must be made in writing to the director of public works/county engineer and must include a sketch or site plan with the name of the applicant, the legal description of the property, a sketch of the proposed improvement, the boundaries of the RPA and RMA, and the location of the existing private water supply and existing and proposed on-site sewage facilities and primary and reserve sewage drainfields. An environmental site assessment as described in section 10-33 and a water quality impact assessment as defined in section 10-39 of chapter 10 of the County Code must be submitted. The director of public works/county engineer shall forward a copy of all exception requests submitted to him to the director of planning.

E. For requests for an exception to subsection (g) *Chesapeake Bay Preservation Area development standards and general performance criteria*, the director of public works/county engineer shall review the exception request and the water quality impact assessment and may grant the exception with necessary conditions and safeguards if the director of public works/county engineer finds:

1. The request for the exception is the minimum necessary to afford relief;

2. Granting the exception will not confer upon the applicant any privilege that is denied to property owners in similar situations;
3. The exception is in harmony with the purpose and intent of this Chapter and does not result in water quality degradation;
4. The exception is not based on conditions or circumstances that are self-created or self-imposed; and
5. Reasonable and appropriate conditions are imposed, as warranted, that will prevent the exception from causing a degradation of water quality.

6.8.2 FORMAL EXCEPTIONS

Exceptions requests to 24-106.3(d) and (f) of the Henrico County Code do not qualify for the administrative process and must be requested in writing from the Planning Commission, which will hold a public hearing to consider the request. The request must include a sketch or site plan providing the name of the applicant, a legal description of the property, a sketch location of all proposed improvements, the boundary of RPAs and RMAs, and the location of existing private water supply and existing or proposed on-site sewage systems and primary and reserve sewage drainfields. An environmental site assessment as described in section 10-33 must be submitted. The request shall also identify the impacts of the proposed exception on water quality on lands within the RPA through the performance of a water quality impact assessment which complies with the provisions defined in Sec. 10-39(b) of the Henrico County Code. In order for the Planning Commission to be able to grant an exception request, the following findings must be made:

1. Granting the exception will not confer upon the applicant any special privilege denied to similarly situated property owners;
2. The exception request is not based on conditions or circumstances that are self-created or self-imposed, and does the request does not arise from conditions or circumstances either permitted or nonconforming that are related to adjacent parcels;
3. The exception request is the minimum necessary to afford relief;
4. The exception request is in harmony with the purpose and intent of the zoning ordinance and is not of substantial detriment to water quality; and
5. Reasonable and appropriate conditions which will prevent the exception request from causing a degradation of water quality are imposed.

If the Planning Commission cannot make the required findings or refuses to grant the exception, the Planning Commission will return the request for an exception and the water quality impact assessment to the applicant.

6.9 SPA EXCEPTIONS

Exceptions to the SPA criteria described in this Chapter must be pursued through an administrative (Department of Public Works) process. All SPA exception requests must be made in writing to the Administrator and must include a sketch or plan with the name of the applicant, the legal description of the property, a sketch of the proposed improvement, and the boundaries of the SPA. In order for the Administrator to be able to approve such a waiver, the following findings must be made:

1. The request for the exception is the minimum necessary to afford relief;
2. Granting the exception will not confer upon the applicant any privilege that is denied to property owners in similar situations;
3. The exception is in harmony with the purpose and intent of this Chapter and does not result in water quality degradation;
4. The exception is not based on conditions or circumstances that are self-created or self-imposed; and
5. Reasonable and appropriate conditions are imposed, as warranted, that will prevent the exception from causing a degradation of water quality.

6.10 ENVIRONMENTAL PROTECTION AREA SIGNS

Environmental Protection Area (EPA) signs are required in single family neighborhoods where wetlands, stream channels, RPAs, and/or SPAs are located on individual/private-owned lots in accordance with Minimum Design Standard 6.01 found in this chapter. These signs are not required within multi-family neighborhoods or commercial developments.

MINIMUM DESIGN STANDARD 6.01 ENVIRONMENTAL PROTECTION AREA SIGN

Definition

Environmental Protection Area signage is the act of erecting signs along the boundary of sensitive environmental features within residential subdivisions to alert citizens to their presence and the need for good environmental stewardship in these areas.

Purpose

The purpose of Environmental Protection Area signage is to protect sensitive environmental features from secondary impacts after completion of construction activities. Waters of the U. S., including wetlands, Resource Protection Areas, and Stream Protection Areas should be maintained only as natural areas, with minimal alterations, in order that they may function properly within the watershed.

Design Criteria

- ❑ **Spacing:** Generally, the signs will be located on the lot lines at the intersection of the landward edge of the wetlands, RPA buffer, or 50-foot stream protection buffer, and at other locations which will approximately delineate the wetland/RPA boundary/stream protection buffer boundary. Additional signs will be located as necessary such that the spacing between two consecutive signs does not exceed 100 feet. Signs will be equally spaced between the signs on the lot lines.
- ❑ **Location:** As noted, the signs will be located on the lot lines at the intersection of the landward edge of the wetlands, RPA, or stream protection buffer and at other locations which will approximately delineate the wetland, RPA, or stream protection buffer boundary. Any additional signs required to meet the spacing requirements must be located on the wetland, RPA, or stream protection buffer delineation line.
- ❑ **Installation:** Where possible, the signs will be mounted to a tree larger than three (3) inches in diameter at breast height. The signs must be mounted between four (4) and six (6) feet above the ground surface. Where it is not possible to mount the sign to a tree, a treated wood 4 by 4 or a metal signpost must be installed. The post must extend below the ground surface at least 24 inches. Again, the signs will be mounted between four (4) and six (6) feet above the ground surface.