

# PROPOSED COMPREHENSIVE PLAN AMENDMENT

ITEM: PA 2013-CW-9CP September 8, 2021

**GENERAL LOCATION:** Countywide

SUPERVISOR DISTRICT: All

PLANNING AREA: All

PLANNING DISTRICT: All

SUB-DISTRICT DESIGNATION: All

PARCEL LOCATION: All

Coastal Resource Management/ Tidal Shoreline Erosion Control

For additional information about this amendment call (703) 324-1380.

PLANNING COMMISSION PUBLIC HEARING:

Wednesday, September 29, 2021 @ 7:30 PM

**BOARD OF SUPERVISORS PUBLIC HEARING:** 

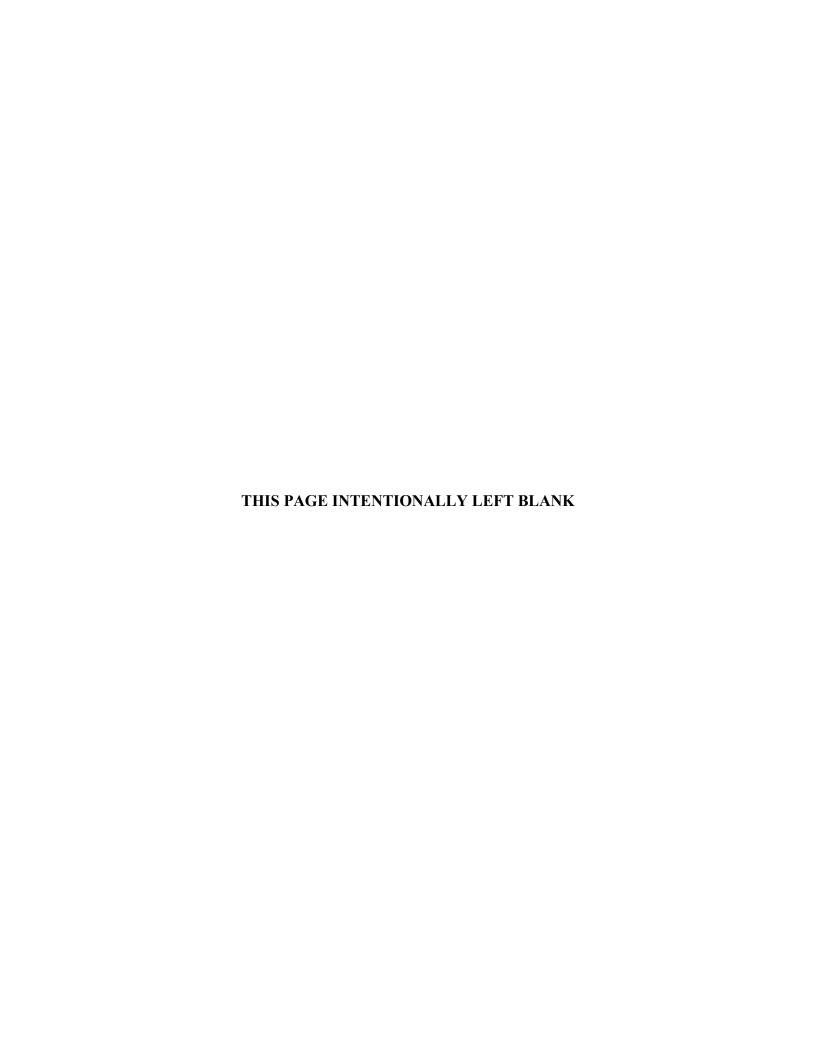
Tuesday, November 9, 2021 @ 4:00 PM

PLANNING STAFF <u>DOES</u> RECOMMEND THIS ITEM FOR PLAN AMENDMENT



Reasonable accommodation is available upon 48 hours notice. For additional information about accommodation call the Planning Commission office at (703) 324-2865, or the Board of Supervisors office at (703) 324-3151.

MAP NOT APPLICABLE



## STAFF REPORT FOR POLICY PLAN AMENDMENT 2013-CW-9CP

## **BACKGROUND**

The following is a summary of County and Virginia Senate Bill legislative actions related to Coastal Resource Management/Tidal Shoreline Erosion Control and summarizes the evolution of requirements from the Commonwealth and related amendments adopted by the Board of Supervisors ("Board") related to tidal shoreline management.

## 2004 – Comprehensive Plan Amendment (S04-CW-1CP)

In 2004, the Board adopted Comprehensive Plan amendment S04-CW-1CP which updated the Policy Plan volume of the Comprehensive Plan ("Plan") to bring the Plan into compliance with comprehensive planning requirements of Virginia's Chesapeake Bay Preservation Act and Chesapeake Bay Preservation Area Designation and Management Regulations (established pursuant to Virginia's Chesapeake Bay Preservation Act). As part of this amendment, the County was directed to undertake and complete a shoreline erosion control inventory using available existing resources that would identify areas where erosion is occurring and characterize the rates of erosion along the tidal shorelines, as well as develop policies and implementation strategies for use by the County's Wetlands Board in approving structures designed to prevent shoreline erosion. As part of the approved Plan language, an appendix was added to the Environment element of the Policy Plan entitled "Guidelines for Tidal Shoreline Erosion Control Measures". These guidelines, which support the Fairfax County Wetlands Board in its permitting decisions related to shoreline erosion control practices, emphasize the preference for the use of living shoreline approaches to tidal shoreline erosion control. The components of a living shoreline and its applicability in Fairfax County are discussed in greater detail below in the Analysis section.

## 2011 – Virginia Senate Bill 964 (SB964)

In 2011, Virginia Senate Bill 964 established "living shorelines" as the preferred alternative for stabilizing tidal shorelines in the Commonwealth of Virginia by adding §28.2-104.1 to the Code of Virginia. Additionally, the Governor also signed legislation to add section §15.2-2223.2 to the Code of Virginia, which codified a new directive for shoreline management in the Tidewater areas of Virginia, which requires Tidewater localities (of which Fairfax County is one) to include state-developed guidance on coastal resource management in local Comprehensive Plans. In support of these efforts, and as required by subdivision 9 of §28.2-1100, the Virginia Institute of Marine Science (VIMS) developed a Comprehensive Coastal Resource Management Portal (CCRMP) that contains information related to shoreline conditions and management options to be used by Tidewater localities during the permitting review process.

## 2013 – Comprehensive Plan Amendment Authorization (2013-CW-9CP)

To implement Senate Bill 964, on July 9, 2013, the Board authorized consideration of a Comprehensive Plan amendment for Coastal Resource Management/Tidal Shoreline Erosion Control, which is a countywide policy within the Policy Plan volume of the Comprehensive Plan. While the county has had Comprehensive Plan guidance since 2004 regarding living shorelines that is generally consistent with the 2011 state legislation, this legislation provided an

opportunity to update Plan guidance related to the Code of Virginia and specifically reference additional resources available related to shoreline management. Since the current Comprehensive Plan has guidance that is generally consistent with the 2011 legislation, the Plan amendment was not pursued at that time.

## <u>2020 – Virginia Senate Bill 776 (SB776)</u>

Virginia Senate Bill 776 requires the Virginia Marine Resources Commission (VMRC) and local Wetlands Boards to only consider "living shoreline" approaches to shoreline stabilization, unless the best available science shows that such approaches are not suitable. The legislation specifies the approach and documentation required for permitting living shoreline measures and protection of wetlands within the Wetlands Boards' jurisdiction. As a result of this legislation, VMRC updated the Wetlands Guidelines to provide minimum standards for the protection and conservation of wetlands and to communicate to stakeholders and regulatory authorities that it is the policy of the Commonwealth to support living shorelines. VMRC and local Wetlands Boards now have these guidelines available to assist them in making site-specific shoreline stabilization recommendations, communicate the differences among shoreline stabilization practices, and provide additional information about best available science datasets.

## PROPOSED PLAN AMENDMENT

The requirements detailed in SB776 should be included into the Comprehensive Plan, and the County Wetlands Zoning Ordinance needs to be updated to reflect the changes in the Code of Virginia and the subsequent directive by VMRC. The proposed Wetlands Zoning Ordinance amendment is included in Appendix 1. While the Comprehensive Plan amendment requires a recommendation from the Planning Commission prior to action by the Board of Supervisors, the County Wetlands Zoning Ordinance Amendment requires action only by the Board of Supervisors.

While the Comprehensive Plan includes guidance generally consistent with the 2011 and 2020 state requirements as they pertain to the use of living shorelines, it does not reference the more recent wealth of resource information and guidance provided by the CCRMP or the latest considerations for living shoreline approaches provided by VMRC and VIMS that should be evaluated during the permitting review process. The CCRMP provides comprehensive guidance on shoreline conditions and recommended shoreline erosion control best management practices. VMRC's *Tidal Wetlands Guidelines* provide the minimum standards for the protection and conservation of tidal wetlands. Staff therefore recommends that both sets of guidance should be referenced, along with other such guidance documents, in the Plan. Additionally, SB776 provides additional information on living shoreline approaches that should be included in the proposed Comprehensive Plan amendment.

Consistent with SB964 and SB776, the proposed Plan Amendment would update the policies within the Environment element of the Policy Plan, so that, as a matter of policy, "living shoreline" approaches would be the only consideration to shoreline stabilization, unless the best available science shows that such approaches are not suitable.

In addition, Appendix 1 of the Environment Element of the Policy Plan, "Guidelines for Tidal Shoreline Erosion Control Measures", would be modified to reference the CCRMP; to endorse its use, along with the other relevant guiding documents from the state that are currently referenced; and, to include the latest considerations for living shoreline approaches during the permitting review process. A definition of "living shoreline" would also be added to the Plan glossary, applying the State Code and VMRC definition for living shoreline practices.

## **ANALYSIS**

Tidal shorelines and wetlands are located at the edge of a water body and are areas influenced by tidal waves. Changes in tides and larger storms can increase erosion at the shoreline edge, resulting in the loss of shoreline area and property. Property owners may consider installing shoreline structures, like bulkheads or placing riprap to attempt to reduce property loss. While these structures may provide stability along shoreline areas with longer fetch, or shorelines that experience longer distances of open water and wind gusts, hardened solutions to shoreline stabilization

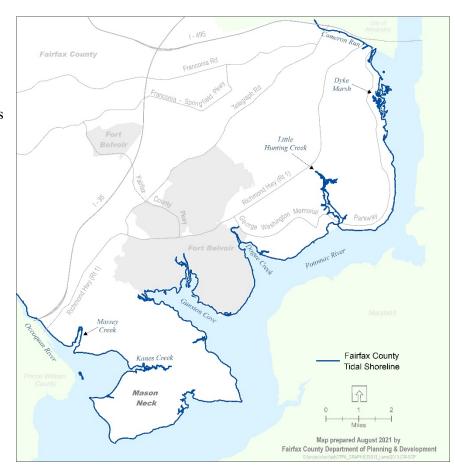


Figure 1: Tidal Shorelines in Fairfax County

can cause negative impacts to the surrounding ecosystem. The construction of structures like these requires the removal of most vegetation and once installed, acts as a barrier between aquatic life and the shoreline. In Fairfax County, tidal wetlands are directly adjacent to other protected areas, including Resource Protection Areas (RPAs) and some areas of non-tidal wetlands. Figure 1 shows the approximate 75 miles of tidal shoreline in Fairfax County. These areas are located along the Potomac River and some of its tributaries, which at the northern extent is at the confluence of Cameron Run with the Potomac River and runs downstream to the confluence of Occoquan River with the Potomac River.

Tidal wetlands provide critical habitat for plants and aquatic species that play a major role in the health of the Chesapeake Bay. Living shorelines concepts offer softer stabilization methods. such as the installation of vegetation with strong roots and lower impact hardened materials like sills or submerged stone. These solutions help anchor shoreline soils and break the currents

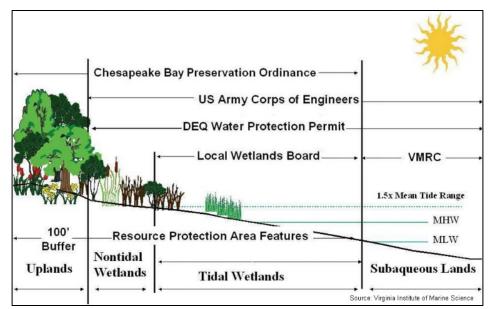


Figure 2: Components of a tidal shoreline

and tides, which allows for tidal wetlands vegetation to grow. In areas of short fetch, these solutions offer benefits to both the property owner and the Chesapeake Bay by reducing shoreline erosion and providing positive benefits to the local ecosystem. Figure 2 shows how tidal wetlands are located on a typical, gradual sloped shoreline and how other features such as, RPAs and other areas protected by the Chesapeake Bay Preservation Ordinance are positioned in relation to our tidal wetlands.

County staff are supportive of SB964 and SB776 as adopted. This legislation supports the use of living shoreline concepts that would provide shoreline stabilization in a manner that protects tidal wetland vegetation, the ecosystem, and reduces shoreline erosion, resulting in greater protection of the Chesapeake Bay. Consistent with this legislation, staff proposes updates to Plan guidance as noted in the "Proposed Plan Amendment" section of this report. These updates propose policy stating that "living shoreline" approaches would be the only consideration to shoreline stabilization, unless the best available science shows that such approaches are not suitable; reference to the CCRMP and to endorse its use, along with the other relevant guiding documents from the state that are currently referenced; and include a definition of "living shoreline" to the Plan glossary. The proposed changes reflect the latest guidance from VMRC and VIMS and would work to ensure protection of ecosystems and tidal shorelines in Fairfax County consistent with adopted legislation.

The proposed Plan amendment and proposed Wetlands Zoning Ordinance were coordinated with the following County Departments:

- Department of Public Works and Environmental Services (DPWES) Stormwater Planning Division:
- Urban Forest Management Division (UFMD) of DPWES;
- Department of Housing and Community Development (HCD);
- Department of Planning and Development (DPD);

- Neighborhood and Community Services (NCS);
- Fairfax County Department of Transportation (FCDOT);
- Fire and Rescue Department (FRD);
- Fairfax County Park Authority (FCPA);
- Department of Land Development Services (LDS) Site Construction Division;
- Northern Virginia Soil and Water Conservation District (NVSWCD); and
- Office of Environment and Energy Coordination (OEEC).

The proposed Plan amendment, along with guidance from VMRC and OCA, was discussed at Wetlands Board public meetings on March 25, 2021 and July 8, 2021. Staff has incorporated feedback from the Wetlands Board into the proposed Plan language.

On July 14, 2021, the proposed Plan amendment was presented to the Environmental Quality Advisory Council (EQAC). EQAC did not have any concerns with the proposed amendment.

The Fairfax County Park Authority noted that archaeological sites may occur along tidal shorelines in the County and any proposed shoreline stabilization project should be reviewed to determine if an archaeological survey is required.

## Planning Commission's Environment Committee Review

On July 29, 2021, the Planning Commission's Environment Committee ("Committee") was briefed on the proposed Plan Amendment and Wetlands Zoning Ordinance Amendment. The Committee supported the proposed approach for both items.

## **CONCLUSION**

The proposed amendment would reinforce long-established policy support for living shoreline approaches of shoreline stabilization while now also referencing the VIMS Comprehensive Coastal Resource Management Portal, consistent with a requirement of the Code of Virginia, as well as the VMRC Tidal Wetlands Guidance. Staff from VIMS and VMRC advised county staff that the proposed amendment appropriately identifies procedures for assessment and review of shoreline erosion control measures and now reflects best industry standards, and that outdated erosion rates should be removed.

#### RECOMMENDATION

Staff recommends the following modifications as shown below. Text proposed to be added is shown as <u>underlined</u> and text proposed to be deleted is shown with a <del>strikethrough</del>. Text shown to be replaced is noted as such.

**MODIFY:** Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, as amended through December 3, 2019, pages 10-11:

"A Chesapeake Bay Supplement has been prepared to address a range of issues related to water quality protection and is incorporated by this reference as part of the Comprehensive Plan. This Supplement includes a map of the county's Chesapeake Bay Preservation Area components as well as discussions and analyses of water quality issues as they relate to pollution sources, infill development, redevelopment, shoreline erosion control, and shoreline access.

## Objective 3: Protect the Potomac Estuary and the Chesapeake Bay from the avoidable impacts of land use activities in Fairfax County.

- Policy a. Ensure that new development and redevelopment complies with the county's Chesapeake Bay Preservation Ordinance, as applied to Chesapeake Bay Preservation Areas adopted by the Board of Supervisors as generally depicted in Figure 5 of the *Chesapeake Bay Supplement* to the Comprehensive Plan, as may be amended by the Board of Supervisors.
- Policy b. Support the analysis and recommendations contained in the *Chesapeake Bay Supplement* to the Comprehensive Plan.
- Policy c. Where tidal shoreline erosion control measures are needed, apply techniques that are consistent with the "Guidelines for Tidal Shoreline Erosion Control Measures" in the Environment Appendix. Consistent with this guidance and with guidance developed by the Virginia Institute of Marine Science pursuant to §15.2-2223.2 of the Code of Virginia and § 28.2-104.1 of the Code of Virginia, support the application of living shoreline approaches as preferred approaches for stabilizing eroding tidal shorelines where practicable.
- Policy d. Boating and other tidal shoreline access structures should be sited, designed, and constructed in a manner that minimizes adverse environmental impacts. Where county approval of tidal shoreline access structures is needed, the following guidelines should be consulted and considered in the decision-making process: the Chesapeake Bay Program's document entitled "Chesapeake Bay Area Public Access Technical Assistance Report;" and the following guidelines issued by the Virginia Marine Resources Commission; "Shoreline Development BMPs," "Wetlands Guidelines," and "Subaqueous Guidelines."
- Policy e. Support efforts to mitigate or compensate for losses of wetlands near the area(s) of impact."

**MODIFY:** Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, as amended through December 3, 2019, pages 23-24:

## "APPENDIX 1

## GUIDELINES FOR TIDAL SHORELINE EROSION CONTROL MEASURES

Measures to control erosion along the county's tidal shoreline are often pursued in order to protect adjacent property. Where county approval of tidal shoreline erosion control measures is needed, the following guidelines the Virginia Marine Resources Commission Habitat Management Division's Tidal Wetlands Guidelines should be consulted. issued by the Virginia Marine Resources Commission should be consulted and considered in the decision-making process: "Shoreline Development BMPs," "Wetlands Guidelines," and "Subaqueous Guidelines." Consistent with this guidance these documents, artificial shoreline structural elements should only be pursued where there is active, detrimental shoreline erosion which cannot be otherwise controlled, and such structures should be constructed in a manner that minimizes adverse wetlands impacts.

Living shoreline approaches to shoreline stabilization (approaches that apply biological techniques, using native plant species) have been identified by the Commonwealth of Virginia as the preferred stabilization methods for tidal shorelines. Only living shoreline approaches should be permitted unless the best available science shows that such approaches are not suitable. If the best available science shows that a living shoreline approach is not suitable, then elements of living shoreline approaches should be incorporated into permitted projects to the maximum extent practicable. Unless otherwise advised through such guidance, best available science resources include:

- <u>Virginia Marine Resources Commission Habitat Management Division's Tidal Wetlands</u> Guidelines,
- <u>Virginia Institute of Marine Science's Comprehensive Coastal Resource Management</u> Portal, and
- <u>Virginia Institute of Marine Science as the Commonwealth's designated science advisor</u> on coastal and marine natural resource-related issues.

Shoreline stabilization approaches that apply biological techniques, using native plant species, are preferred where such approaches are consistent with the best available technical guidance, which may include guidance provided by the Virginia Marine Resources Commission, the Virginia Institute of Marine Science, and the Shoreline Erosion Advisory Service. Unless otherwise advised through such guidance, the following preferences, as refined from guidance developed by the Hampton Roads Planning District Commission and subsequently recommended for broader application in tidal areas by the Division of Chesapeake Bay Local Assistance of the Virginia Department of Conservation and Recreation (formerly the Chesapeake Bay Local Assistance Department), should be applied, where feasible, in determining the appropriate approaches to shoreline stabilization (with practices listed in decreasing order of preference):

Areas with Low Erosion Rates (< 1 ft/yr.) (low energy shorelines with an average fetch exposure of <1 nautical mile)

- 1. Vegetative stabilization with or without bank re-grading
- 2. Revetments
- 3. Bulkheads

Areas with Moderate Erosion Rates (1-3 ft/yr.) (medium energy shorelines with an average fetch exposure of 1-5 nautical miles)

- 1. Vegetative stabilization with/or without bank grading
- 2. Revetments
- 3. Breakwaters
- 4. Groins\*
- 5. Bulkheads

Areas with Severe Erosion Rates (> 3 ft/yr.) (high energy shorelines with an average fetch exposure of > 5 nautical miles)

- 1. Relocation (of threatened structures)
- 2. Revetments
- 3. Breakwaters
- 4. Groins\*
- 5. Seawalls

\*Groins may not be appropriate in riverine conditions or where they may impede navigation."

**ADD:** Fairfax County Comprehensive Plan, 2017 Edition, Glossary, as amended through February 23, 2021, page 9:

"LIVING SHORELINE: A "living shoreline" is a shoreline management practice that provides erosion control and water quality benefits; protects, restores, or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials. When practicable, a living shoreline may enhance coastal resilience and attenuation of wave energy and storm surge."

#### COMPREHENSIVE LAND USE PLAN MAP:

The Comprehensive Land Use Plan Map will not change.

## COUNTYWIDE TRANSPORTATION PLAN MAP:

The Countywide Transportation Plan Map will not change.



# STAFF REPORT

## V I R G I N I A

## PROPOSED COUNTY CODE AMENDMENT

Chapter 116 (Wetlands Zoning Ordinance) of the Fairfax County Code

## **PUBLIC HEARING DATE**

Planning Commission N/A

Board of Supervisors November 9, 2021 at 4:00 p.m.

PREPARED BY PLANNING DIVISION

DEPARTMENT OF PLANNING AND DEVELOPMENT

703-324-1380

TBD



## **STAFF COMMENT**

## **Issue**

The proposed amendments to Chapter 116 (Wetlands Zoning Ordinance) of the Fairfax County Code were prepared in response to adoption of Senate Bill 776 (SB 776) and a subsequent directive by the Virginia Marine Resources Commission (VMRC), Habitat Management Division for localities to amend their Wetland Zoning Ordinance to include updated provisions set forth in §28.2-1302 of the Code of Virginia. SB 776 was passed during the 2020 Legislative Session and amends §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia, related to wetlands protection and living shorelines. The text language provided in the current Wetlands Zoning Ordinance has been updated with proposed text language underlined and is available at the end of this report. Additional components include a Comprehensive Plan Amendment 2013-CW-9CP, addressing the inclusion of guidance on coastal resource management into the Policy Plan volume of the Comprehensive Plan; the adopted SB 776 text (Attachment B); and Memorandum to Local Wetlands Boards (Attachment C).

It should also be noted that the Wetlands Zoning Ordinance provided in Code of Virginia §28.2-1302 notes that the ordinance "shall serve as the only wetlands zoning ordinance under which any wetlands board is authorized to operate." The proposed amendment implements Senate Bill 776 and would bring Fairfax County's Wetlands Zoning Ordinance into compliance with the Code of Virginia by adding language authorized by the Commonwealth related to the use of living shorelines and protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards.

## **Background**

Va. Code Ann. §§ 28.2-1300 through -1320 (2011) ("the Wetlands Act") authorizes any locality in Virginia to adopt a local Wetlands Zoning Ordinance and create a local Wetlands Board. The Board of Supervisors exercised this authority by adopting Chapter 116 of the Fairfax County Code ("Wetlands Zoning Ordinance") and establishing the Wetlands Board in 1983. The Wetlands Zoning Ordinance is separate from the Zoning Ordinance, which is in Chapter 112 of the Fairfax County Code.

Pursuant to Fairfax County Code § 116-1-9, the Wetlands Board is required, among other things, to preserve and prevent "the despoliation and destruction of wetlands within its jurisdiction while accommodating necessary economic development consistent with wetlands preservation." Any person who desires to use or develop land within tidal wetlands in Fairfax County must first obtain a permit from the Wetlands Board or the Virginia Marine Resources Commission ("VMRC")¹ (Fairfax County Code § 116-1-4; Va. Code Ann. § 28.2-1306.) VMRC oversees all development in wetlands throughout the Commonwealth and assists localities in regulating tidal wetlands within their jurisdictions by promulgating guidelines or regulations that scientifically evaluate vegetated and non-vegetated wetlands by type and describe the consequences of use of these wetland types. The Wetlands Board reviews and

<sup>1</sup> Traditionally in Fairfax County, wetlands permit applicants submit a joint permit application to the Wetlands Board and VMRC.

approves permits that impact lands contiguous to a tidal body of water and lying between mean low water and mean high water and are subject to flooding by normal tides and wind tides. Within Fairfax County, the areas that are influenced by tides are located along the Potomac River and some of its tributaries, which at the northern extent is at the confluence of Cameron Run with the Potomac River and runs downstream to the confluence of Occoquan River with the Potomac River. Therefore, these proposed amendments would only apply to tidal wetlands in Fairfax County.

The County Wetlands Zoning Ordinance needs be amended to reflect the changes in the Code of Virginia. Additionally, SB 776 provides additional information on living shoreline approaches that are included in the pending Comprehensive Plan Amendment.

## **Proposed Wetlands Zoning Ordinance Amendment**

Staff proposes two amendments to the Wetlands Zoning Ordinance that derive directly from SB 776. First, as part of any permit application, a statement should be included indicating whether use of a living shoreline as defined in § 28.2-104.1 for a shoreline management practice is not suitable, including reasons for the determination. When considering the suitability of a living shoreline design or treatment, the Wetlands Board must look to the Virginia Institute of Marine Science Office of Research and Advisory Services in instances in which there is a question as to what constitutes the "best available science." Additionally, the local Wetlands Board should ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards in accordance with the Code of Virginia.

## **Conclusion**

In order to comply with the Code of Virginia, County staff recommends the Board of Supervisors adopt the proposed amendments to the Wetlands Zoning Ordinance. Staff recommends the following modifications as shown below. Text proposed to be added is shown as underlined, there are no proposed deletions of text.

The adoption of these amendments would further protect wetlands within the local Wetland Board's jurisdiction and be consistent with established best management practices for shoreline stabilization. Staff recommends approval of the proposed amendment language with an effective date of 12:01 AM on the day following adoption.

# PROPOSED AMENDMENTS CHAPTER 116 (WETLANDS ZONING ORDINANCE) OF THE FAIRFAX COUNTY CODE

# Amend Article 1. In General, Section 116-1-4. Application for Permit, by revising Par. (b) to read as follows:

2 3 4

5

6

7

8

9

10

11 12

13

14

15

16

17 18

19

20

21

1

(b) The permit application shall include the following: the name and address of the applicant: a detailed description of the proposed activities; a map, drawn to an appropriate and uniform scale, showing the area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location, width, depth and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances or facilities, including those on adjacent uplands; a statement indicating whether use of a living shoreline as defined in § 28.2-104.1 for a shoreline management practice is not suitable, including reasons for the determination; a description of the type of equipment to be used and the means of equipment access to the activity site; the names and addresses of owners of record of adjacent land and known claimants of water rights in or adjacent to the wetland of whom the applicant has notice; an estimate of cost; the primary purpose of the project; any secondary purposes of the project, including further projects; the public benefit to be derived from the proposed project; a complete description of measures to be taken during and after the alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require.

22 23

24

# Amend Article 1. In General, Section 116-1-9. Board Responsibilities, by revising Par. to read as follows:

252627

28

29

30

31

32

- In fulfilling its responsibilities under this Ordinance, the Board shall preserve and prevent the despoliation and destruction of wetlands within its jurisdiction while accommodating necessary economic development consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in *Code of Virginia* § 28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including the provisions of guidelines and minimum standards promulgated by the Commission
- pursuant to § 28.2-1301 of the Code of Virginia.

## VIRGINIA ACTS OF ASSEMBLY — CHAPTER

An Act to amend and reenact §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia, relating to wetlands protection; living shorelines.

[S 776] **5** 

Be it enacted by the General Assembly of Virginia:

 1. That §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia are amended and reenacted as follows:

§ 28.2-104.1. Living shorelines; development of general permit; guidance.

A. As used in this section, unless the context requires a different meaning:

"Living shoreline" means a shoreline management practice that provides erosion control and water quality benefits; protects, restores or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials.

- B. The Commission, in cooperation with the Department of Conservation and Recreation, the Department of Environmental Quality, and local wetlands boards, and with technical assistance from the Virginia Institute of Marine Science, shall establish and implement a general permit regulation that authorizes and encourages the use of living shorelines as the preferred alternative for stabilizing tidal shorelines in the Commonwealth. The regulation shall provide for an expedited permit review process for qualifying living shoreline projects requiring authorization under Chapters 12 (§ 28.2-1200 et seq.), 13 (§ 28.2-1300 et seq.), and 14 (§ 28.2-1400 et seq.). In developing the general permit, the Commission shall consult with the U.S. Army Corps of Engineers to ensure the minimization of conflicts with federal law and regulation.
- C. The Commission, in cooperation with the Department of Conservation and Recreation and with technical assistance from the Virginia Institute of Marine Science, shall develop integrated guidance for the management of tidal shoreline systems to provide a technical basis for the coordination of permit decisions required by any regulatory entity exercising authority over a shoreline management project. The guidance shall:
- 1. Communicate to stakeholders and regulatory authorities that it is the policy of the Commonwealth to support living shorelines as the preferred alternative for stabilizing tidal shorelines;
- 2. Identify preferred shoreline management approaches for the shoreline types found in the Commonwealth;
- 3. Explain the risks and benefits of protection provided by various shoreline system elements associated with each management option; and
- 4. Recommend procedures to achieve efficiency and effectiveness by the various regulatory entities exercising authority over a shoreline management project.
- D. The Commission shall permit only living shoreline approaches to shoreline management unless the best available science shows that such approaches are not suitable. If the best available science shows that a living shoreline approach is not suitable, the Commission shall require the applicant to incorporate, to the maximum extent possible, elements of living shoreline approaches into permitted projects.

## § 28.2-1301. Powers and duties of the Commission.

- A. The Commission may receive gifts, grants, bequests, and devises of wetlands and money which shall be held for the uses prescribed by the donor, grantor, or testator and in accordance with the provisions of this chapter. The Commission shall manage any wetlands it receives so as to maximize their ecological value as provided in Article 2 (§ 28.2-1503 et seq.) of Chapter 15 of this title.
- B. The Commission shall preserve and prevent the despoliation and destruction of wetlands while accommodating necessary economic development in a manner consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in § 28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including guidelines and minimum standards promulgated by the Commission pursuant to subsection C.
- C. In order to perform its duties under this section and to assist counties, cities, and towns in regulating wetlands, the Commission shall promulgate and periodically update (i) guidelines which that scientifically evaluate vegetated and nonvegetated wetlands by type and describe the consequences of use of these wetlands types and (ii) minimum standards for protection and conservation of wetlands. The Virginia Institute of Marine Science shall provide advice and assistance to the Commission in developing these guidelines and minimum standards by evaluating wetlands by type and continuously

maintaining and updating an inventory of vegetated wetlands.

D. In developing guidelines, *standards*, or regulations under this chapter the Commission shall consult with all affected state agencies. Consistent with other legal rights, consideration shall be given to the unique character of the Commonwealth's tidal wetlands which are essential for the production of marine and inland wildlife, waterfowl, finfish, shellfish and flora; serve as a valuable protective barrier against floods, tidal storms and the erosion of the Commonwealth's shores and soil; are important for the absorption of silt and pollutants; and are important for recreational and aesthetic enjoyment of the people and for the promotion of tourism, navigation and commerce.

§ 28.2-1302. Adoption of wetlands zoning ordinance; terms of ordinance.

Any county, city or town may adopt the following ordinance, which, after October 1, 1992, shall serve as the only wetlands zoning ordinance under which any wetlands board is authorized to operate. Any county, city, or town which has adopted the ordinance prior to October 1, 1992, shall amend the ordinance to conform it to the ordinance contained herein by October 1, 1992.

Wetlands Zoning Ordinance

§ 1. The governing body of \_\_\_\_\_\_, acting pursuant to Chapter 13 (§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia, adopts this ordinance regulating the use and development of wetlands.

§ 2. As used in this ordinance, unless the context requires a different meaning:

"Back Bay and its tributaries" means the following, as shown on the United States Geological Survey Quadrangle Sheets for Virginia Beach, North Bay, and Knotts Island: Back Bay north of the Virginia-North Carolina state line; Capsies Creek north of the Virginia-North Carolina state line; Deal Creek; Devil Creek; Nawney Creek; Redhead Bay, Sand Bay, Shipps Bay, North Bay, and the waters connecting them; Beggars Bridge Creek; Muddy Creek; Ashville Bridge Creek; Hells Point Creek; Black Gut; and all coves, ponds and natural waterways adjacent to or connecting with the above-named bodies of water.

"Commission" means the Virginia Marine Resources Commission.

"Commissioner" means the Commissioner of Marine Resources.

"Governmental activity" means any of the services provided by this.. (county, city, or town) to its citizens for the purpose of maintaining this \_\_\_\_\_\_ (county, city, or town), including but not limited to such services as constructing, repairing and maintaining roads; providing sewage facilities and street lights; supplying and treating water; and constructing public buildings.

"Nonvegetated wetlands" means unvegetated lands lying contiguous to mean low water and between mean low water and mean high water, including those unvegetated areas of Back Bay and its tributaries and the North Landing River and its tributaries subject to flooding by normal and wind tides but not hurricane or tropical storm tides.

"North Landing River and its tributaries" means the following, as shown on the United States Geological Survey Quadrangle Sheets for Pleasant Ridge, Creeds, and Fentress: the North Landing River from the Virginia-North Carolina line to Virginia Highway 165 at North Landing Bridge; the Chesapeake and Albemarle Canal from Virginia Highway 165 at North Landing Bridge to the locks at Great Bridge; and all named and unnamed streams, creeks and rivers flowing into the North Landing River and the Chesapeake and Albemarle Canal except West Neck Creek north of Indian River Road, Pocaty River west of Blackwater Road, Blackwater River west of its forks located at a point approximately 6400 feet due west of the point where Blackwater Road crosses the Blackwater River at the village of Blackwater, and Millbank Creek west of Blackwater Road.

"Person" means any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

"Vegetated wetlands" means lands lying between and contiguous to mean low water and an elevation above mean low water equal to the factor one and one-half times the mean tide range at the site of the proposed project in the county, city, or town in question, and upon which is growing any of the following species: saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), saltgrass (Distichlis spicata), black needlerush (Juncus roemerianus), saltwort (Salicornia spp.), sea lavender (Limonium spp.), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), sea oxeye (Borrichia frutescens), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), sea rocket (Cakile edentula), southern wildrice (Zizaniopsis miliacea), cattail (Typha spp.), three-square (Scirpus spp.), buttonbush (Cephalanthus occidentalis), bald cypress (Taxodium distichum), black gum (Nyssa sylvatica), tupelo (Nyssa aquatica), dock (Rumex spp.), yellow pond lily (Nuphar sp.), marsh fleabane (Pluchea purpurascens), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's tick (Bidens sp.), smartweed (Polygonum sp.), arrowhead (Sagittaria spp.), sweet flag (Acorus calamus), water hemp (Amaranthus cannabinus), reed grass (Phragmites communis), or switch grass (Panicum virgatum).

"Vegetated wetlands of Back Bay and its tributaries" or "vegetated wetlands of the North Landing

River and its tributaries" means all marshes subject to flooding by normal and wind tides but not hurricane or tropical storm tides, and upon which is growing any of the following species: saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), black needlerush (Juncus roemerianus), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), cattail (Typha spp.), three-square (Scirpus spp.), dock (Rumex sp.), smartweed (Polygonum sp.), yellow pond lily (Nuphar sp.), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's tick (Bidens sp.), arrowhead (Sagittaria sp.), water hemp (Amaranthus cannabinus), reed grass (Phragmites communis), or switch grass (Panicum virgatum).

"Wetlands" means both vegetated and nonvegetated wetlands.

"Wetlands board" or "board" means a board created pursuant to § 28.2-1303 of the Code of Virginia. § 3. The following uses of and activities in wetlands are authorized if otherwise permitted by law:

- 1. The construction and maintenance of noncommercial catwalks, piers, boathouses, boat shelters, fences, duckblinds, wildlife management shelters, footbridges, observation decks and shelters and other similar structures, provided that such structures are so constructed on pilings as to permit the reasonably unobstructed flow of the tide and preserve the natural contour of the wetlands;
  - 2. The cultivation and harvesting of shellfish, and worms for bait;
- 3. Noncommercial outdoor recreational activities, including hiking, boating, trapping, hunting, fishing, shellfishing, horseback riding, swimming, skeet and trap shooting, and shooting on shooting preserves, provided that no structure shall be constructed except as permitted in subdivision 1 of this section;
- 4. Other outdoor recreational activities, provided they do not impair the natural functions or alter the natural contour of the wetlands;
  - 5. Grazing, haying, and cultivating and harvesting agricultural, forestry or horticultural products;
- 6. Conservation, repletion and research activities of the Commission, the Virginia Institute of Marine Science, the Department of Game and Inland Fisheries and other conservation-related agencies;
- 7. The construction or maintenance of aids to navigation which are authorized by governmental authority;
- 8. Emergency measures decreed by any duly appointed health officer of a governmental subdivision acting to protect the public health;
- 9. The normal maintenance and repair of, or addition to, presently existing roads, highways, railroad beds, or facilities abutting on or crossing wetlands, provided that no waterway is altered and no additional wetlands are covered;
- 10. Governmental activity in wetlands owned or leased by the Commonwealth or a political subdivision thereof;
- 11. The normal maintenance of man-made drainage ditches, provided that no additional wetlands are covered. This subdivision does not authorize the construction of any drainage ditch; and
- 12. The construction of living shoreline projects authorized pursuant to a general permit developed under subsection B of § 28.2-104.1.
- § 4. A. Any person who desires to use or develop any wetland within this \_\_\_\_\_ (county, city, or town), other than for the purpose of conducting the activities specified in § 3 of this ordinance, shall first file an application for a permit directly with the wetlands board or with the Commission.
- B. The permit application shall include the following: the name and address of the applicant; a detailed description of the proposed activities; a map, drawn to an appropriate and uniform scale, showing the area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location, width, depth and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances or facilities, including those on adjacent uplands; a statement indicating whether use of a living shoreline as defined in § 28.2-104.1 for a shoreline management practice is not suitable, including reasons for the determination; a description of the type of equipment to be used and the means of equipment access to the activity site; the names and addresses of owners of record of adjacent land and known claimants of water rights in or adjacent to the wetland of whom the applicant has notice; an estimate of cost; the primary purpose of the project; any secondary purposes of the project, including further projects; the public benefit to be derived from the proposed project; a complete description of measures to be taken during and after the alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require.
- C. A nonrefundable processing fee shall accompany each permit application. The fee shall be set by the applicable governing body with due regard for the services to be rendered, including the time, skill, and administrator's expense involved.

§ 5. All applications, maps, and documents submitted shall be open for public inspection at the office designated by the applicable governing body and specified in the advertisement for public hearing required under § 6 of this ordinance.

- § 6. Not later than 60 days after receipt of a complete application, the wetlands board shall hold a public hearing on the application. The applicant, local governing body, Commissioner, owner of record of any land adjacent to the wetlands in question, known claimants of water rights in or adjacent to the wetlands in question, the Virginia Institute of Marine Science, the Department of Game and Inland Fisheries, the Water Control Board, the Department of Transportation, and any governmental agency expressing an interest in the application shall be notified of the hearing. The board shall mail these notices not less than 20 days prior to the date set for the hearing. The wetlands board shall also cause notice of the hearing to be published at least once a week for two weeks prior to such hearing in a newspaper of general circulation in this \_\_\_\_\_\_ (county, city, or town). The published notice shall specify the place or places within this \_\_\_\_\_\_ (county, city, or town) where copies of the application may be examined. The costs of publication shall be paid by the applicant.
- § 7. A. Approval of a permit application shall require the affirmative vote of three members of a five-member board or four members of a seven-member board.
- B. The chairman of the board, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. Any person may testify at the public hearing. Each witness at the hearing may submit a concise written statement of his testimony. The board shall make a record of the proceeding, which shall include the application, any written statements of witnesses, a summary of statements of all witnesses, the findings and decision of the board, and the rationale for the decision.
- C. The board shall make its determination within 30 days of the hearing. If the board fails to act within that time, the application shall be deemed approved. Within 48 hours of its determination, the board shall notify the applicant and the Commissioner of its determination. If the board fails to make a determination within the 30-day period, it shall promptly notify the applicant and the Commission that the application is deemed approved. For purposes of this section, "act" means taking a vote on the application. If the application receives less than four affirmative votes from a seven-member board or less than three affirmative votes from a five-member board, the permit shall be denied.
- D. If the board's decision is reviewed or appealed, the board shall transmit the record of its hearing to the Commissioner. Upon a final determination by the Commission, the record shall be returned to the board. The record shall be open for public inspection at the same office as was designated under § 5 of this ordinance.
- § 8. The board may require a reasonable bond or letter of credit in an amount and with surety and conditions satisfactory to it, securing to the Commonwealth compliance with the conditions and limitations set forth in the permit. The board may, after a hearing held pursuant to this ordinance, suspend or revoke a permit if the applicant has failed to comply with any of the conditions or limitations set forth in the permit or has exceeded the scope of the work described in the application. The board may, after a hearing, suspend a permit if the applicant fails to comply with the terms and conditions set forth in the application.
- § 9. In fulfilling its responsibilities under this ordinance, the board shall preserve and prevent the despoliation and destruction of wetlands within its jurisdiction while accommodating necessary economic development in a manner consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in § 28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including the provisions of guidelines and minimum standards promulgated by the Commission pursuant to § 28.2-1301 of the Code of Virginia.
- § 10. A. In deciding whether to grant, grant in modified form or deny a permit, the board shall consider the following:
  - 1. The testimony of any person in support of or in opposition to the permit application;
  - 2. The impact of the proposed development on the public health, safety, and welfare; and
- 3. The proposed development's conformance with standards prescribed in § 28.2-1308 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1301 of the Code of Virginia.
  - B. The board shall grant the permit if all of the following criteria are met:
- 1. The anticipated public and private benefit of the proposed activity exceeds its anticipated public and private detriment.
- 2. The proposed development conforms with the standards prescribed in § 28.2-1308 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1301 of the Code of Virginia.
- 3. The proposed activity does not violate the purposes and intent of this ordinance or Chapter 13 (§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia.
- C. If the board finds that any of the criteria listed in subsection B of this section are not met, the board shall deny the permit application but allow the applicant to resubmit the application in modified

form.

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263 264

265266

267 268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

**290** 

291

292

293

294

295

296

297

298

- § 11. The permit shall be in writing, signed by the chairman of the board or his authorized representative, and notarized. A copy of the permit shall be transmitted to the Commissioner.
- § 12. No permit shall be granted without an expiration date established by the board. Upon proper application, the board may extend the permit expiration date.
- § 13. No permit granted by a wetlands board shall in any way affect the applicable zoning and land use ordinances of this \_\_\_\_\_ (county, city, or town) or the right of any person to seek compensation for any injury in fact incurred by him because of the proposed activity.

## § 28.2-1308. Standards for use and development of wetlands; utilization of guidelines.

- A. The following standards shall apply to the use and development of wetlands and shall be considered in the determination of whether any permit required by this chapter should be granted or denied:
- 1. Wetlands of primary ecological significance shall not be altered so that the ecological systems in the wetlands are unreasonably disturbed; and
- 2. Development in Tidewater Virginia, to the maximum extent practical, shall be concentrated in wetlands of lesser ecological significance, in vegetated wetlands which have been irreversibly disturbed before July 1, 1972, in nonvegetated wetlands which have been irreversibly disturbed prior to January 1, 1983, and in areas of Tidewater Virginia outside of wetlands.
- B. The provisions of guidelines *and minimum standards* promulgated by the Commission pursuant to § 28.2-1301 shall be considered in applying the standards listed in subsection A of this section.
- C. When any activity authorized by a permit issued pursuant to this chapter is conditioned upon compensatory mitigation for adverse impacts to wetlands, the applicant may be permitted to satisfy all or part of such mitigation requirements by the purchase or use of credits from any wetlands mitigation bank, including any banks owned by the permit applicant, that has been approved and is operating in accordance with applicable federal and state guidance, laws, or regulations for the establishment, use and operation of mitigation banks as long as (i) the bank is in the same fourth order subbasin, as defined by the hydrologic unit boundaries of the National Watershed Boundary Dataset or by the hydrologic unit system or dataset utilized and depicted or described in the bank's approved mitigation banking instrument, as the impacted site, or in an adjacent subbasin within the same river watershed, as the impacted site, or it meets all the conditions found in clauses (a) through (d) and either clause (e) or (f) of this subsection; (ii) the bank is ecologically preferable to practicable on-site and off-site individual mitigation options, as defined by federal wetland regulations; and (iii) the banking instrument, if approved after July 1, 1996, has been approved by a process that included public review and comment. When the bank is not located in the same subbasin or adjacent subbasin within the same river watershed as the impacted site, the purchase or use of credits shall not be allowed unless the applicant demonstrates to the satisfaction of the Commission that (a) the impacts will occur as a result of a Virginia Department of Transportation linear project or as the result of a locality project for a locality whose jurisdiction encompasses multiple river watersheds; (b) there is no practical same river watershed mitigation alternative; (c) the impacts are less than one acre in a single and complete project within a subbasin; (d) there is no significant harm to water quality or fish and wildlife resources within the river watershed of the impacted site; and either (e) impacts within the Chesapeake Bay watershed are mitigated within the Chesapeake Bay watershed as close as possible to the impacted site or (f) impacts within subbasins 02080108, 02080208, and 03010205, as defined by the National Watershed Boundary Dataset, are mitigated in-kind within those subbasins as close as possible to the impacted site. After July 1, 2002, the provisions of clause (f) shall apply only to impacts within subdivisions of the listed subbasins where overlapping watersheds exist, as determined by the Department of Environmental Quality, provided the Department has made such a determination by that date. For the purposes of this subsection, the hydrologic unit boundaries of the National Watershed Boundary Dataset or other hydrologic unit system may be adjusted by the Department of Environmental Quality to reflect site-specific geographic or hydrologic information provided by the bank sponsor.
- D. Where an agreed-upon permit condition requires the contribution of in-lieu fees to offset permitted wetland losses, the wetlands board shall credit the applicant for any in-lieu fee payments made to the Virginia Aquatic Resources Trust Fund or another dedicated wetlands restoration fund with reference to the same activity.

For the purposes of this section, "river watershed" means the Potomac River Basin, Shenandoah River Basin, James River Basin, Rappahannock River Basin, Roanoke and Yadkin Rivers Basin, Chowan River Basin (including the Dismal Swamp and Albemarle Sound), Tennessee River Basin, Big Sandy River Basin, Chesapeake Bay and its Small Coastal Basins, Atlantic Ocean, York River Basin, and the New River Basin.



## COMMONWEALTH of VIRGINIA

Marine Resources Commission
Building 96

Matthew J. Strickler

Matthew J. Strickler

Secretary of Natural Resources

Building 96

380 Fenwick Road

Fort Monroe, VA 23651

Steven G. Bowman Commissioner

May 12, 2020

## **MEMORANDUM**

**TO:** Local Wetlands Boards

**FROM:** Tony Watkinson

Chief, Habitat Management Division

**SUBJECT:** Senate Bill 776

The purpose of this memorandum is to summarize the requirements of Senate Bill 776 (SB776) passed during the 2020 Legislative Session. The bill is attached and as you can see, it amends §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia, relating to wetlands protection and living shorelines. The provisions of this bill involve both the Virginia Marine Resources Commission (VMRC) and Local Wetlands Boards, and become effective July 1, 2020. These changes (in italics) direct that "the Commission shall permit only living shoreline approaches to shoreline management unless the best available science shows that such approaches are not suitable. If the best available science shows that a living shoreline approach is not suitable, the Commission shall require the applicant to incorporate, to the maximum extent possible, elements of living shoreline approaches into permitted projects." In addition, the Commission must promulgate "minimum standards for protection and conservation of wetlands" as part of the Wetlands Guidelines. Furthermore, the wetlands zoning ordinance is amended to require that an application for use or development of any wetlands include a "statement indicating whether use of a living shoreline as defined in §28.2-104.1 for a shoreline management practice is not suitable, including reasons for the determination." To fulfill their responsibilities under the ordinance, SB776 directs that the

Memorandum May 12, 2020 Page Two

Wetlands Boards and Commission shall preserve and prevent the despoliation and destruction of wetlands while accommodating necessary economic development in a manner consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in §28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including the provisions of guidelines, and minimum standards promulgated by the Commission pursuant to §28.2-1301 of the Code of Virginia.

After July 1, 2020, each locality should, at their earliest convenience, update their wetland zoning ordinance to include the modifications in §28.2-1302 of the Code of Virginia resulting from SB776. You are reminded that the wetlands zoning ordinance provided in §28.2-1302 "shall serve as the only wetlands zoning ordinance under which any wetlands board is authorized to operate."

In addition to the promulgation of minimum standards for protection and conservation of wetlands, §28.2-104.1 of the Code of Virginia also directs the VMRC to develop integrated guidance for the management of tidal shorelines which shall:

- 1. Communicate to stakeholders and regulatory authorities that it is the policy of the Commonwealth to support living shorelines as the preferred alternative for stabilizing tidal shorelines;
- 2. Identify preferred shoreline management approaches for the shoreline types found in the Commonwealth;
- 3. Explain the risks and benefits of protection provided by various shoreline system elements associated with each management option;
- 4. Recommend procedures to achieve efficiency and effectiveness by the various regulatory entities exercising authority over a shoreline management project.

VMRC will coordinate with the Department of Conservation and Recreation, Department of Environmental Quality and the Virginia Institute of Marine Science (VIMS) to begin drafting a comprehensive update to the Commission's Wetlands Guidelines including minimum standards for protection and conservation of wetlands. As a part of this update, we will also coordinate our efforts with Wetlands Boards. During this process, VMRC will gather comments and informational needs from the public, localities and other interested parties to guide us in developing our guidance for the management of tidal shorelines. As such, we would welcome any comments you may have regarding additional guidance or standards that may be of benefit to your board. Please provide any comments you wish to make via email to <a href="wetlandsguidelines@mrc.virginia.gov">wetlandsguidelines@mrc.virginia.gov</a> Mrs. Rachael Peabody of our staff will be the Habitat Management Division lead for this effort.

Memorandum May 12, 2020 Page Three

VMRC has received several inquiries from local Wetlands Boards asking how the wetlands review process should be modified, after July 1, 2020, to adhere to SB776. Until the new guidelines and standards are developed and adopted, localities are again reminded that the wetlands zoning ordinance shall serve as the only wetlands zoning ordinance under which any wetlands board is authorized to operate. Localities are reminded that the VIMS Office of Research and Advisory Services and the Department of Conservation's Shoreline Erosion and Advisory Service are available for site-specific advice. Additional online tools include the VIMS Shoreline Studies Program tools and information and the Center for Coastal Resource Management (CCRM) Locality Portals, GIS tools and Decision Tree.

Localities may also utilize the existing Shoreline Management Handbook and VMRC Wetlands Guidelines. The requirement for a statement indicating whether use of a living shoreline is not suitable, including reasons for the determination, should be a significant factor for any permit decision to use or develop wetlands.

Because the obvious intent of the wetlands zoning ordinance is that the tidal wetlands program be ultimately administered at the local level, Wetlands Boards are the key element of this management program. The wetlands zoning ordinance was first made available for local adoption in 1972 and efforts by all Wetlands Boards have served the Commonwealth well for nearly 50 years. The public hearing process provided by the ordinance allows each applicant the opportunity to present their facts to the board for consideration and for the board to evaluate any public comment. These are essential elements of any permit decision along with the requirements of the ordinance, as well as any guidelines or standards that are provided. This citizen-based administration of the program effectively balances wetlands preservation with protection and use of private property. Legislative amendments to the ordinance and changes to administrative procedures have been made for over almost half a century. With each change, the localities and the boards have met every challenge. I am confident this effort will be met with no less success.

Should you have any questions regarding our planned efforts outlined here, please contact me, Mrs. Peabody or the Environmental Engineer assigned to your locality. As usual, the Environmental Engineer assigned to your locality remains available to assist you in the ongoing administration of the wetlands zoning ordinance and permit application review for projects involving tidal wetlands.

TW/RDO:blh HM Attachment

## VIRGINIA ACTS OF ASSEMBLY -- 2020 SESSION

## **CHAPTER 809**

An Act to amend and reenact §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia, relating to wetlands protection; living shorelines.

[S 776]

Approved April 7, 2020

Be it enacted by the General Assembly of Virginia:

1. That §§ 28.2-104.1, 28.2-1301, 28.2-1302, and 28.2-1308 of the Code of Virginia are amended and reenacted as follows:

## § 28.2-104.1. Living shorelines; development of general permit; guidance.

A. As used in this section, unless the context requires a different meaning:

"Living shoreline" means a shoreline management practice that provides erosion control and water quality benefits; protects, restores or enhances natural shoreline habitat; and maintains coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials.

- B. The Commission, in cooperation with the Department of Conservation and Recreation, the Department of Environmental Quality, and local wetlands boards, and with technical assistance from the Virginia Institute of Marine Science, shall establish and implement a general permit regulation that authorizes and encourages the use of living shorelines as the preferred alternative for stabilizing tidal shorelines in the Commonwealth. The regulation shall provide for an expedited permit review process for qualifying living shoreline projects requiring authorization under Chapters 12 (§ 28.2-1200 et seq.), 13 (§ 28.2-1300 et seq.), and 14 (§ 28.2-1400 et seq.). In developing the general permit, the Commission shall consult with the U.S. Army Corps of Engineers to ensure the minimization of conflicts with federal law and regulation.
- C. The Commission, in cooperation with the Department of Conservation and Recreation and with technical assistance from the Virginia Institute of Marine Science, shall develop integrated guidance for the management of tidal shoreline systems to provide a technical basis for the coordination of permit decisions required by any regulatory entity exercising authority over a shoreline management project. The guidance shall:
- 1. Communicate to stakeholders and regulatory authorities that it is the policy of the Commonwealth to support living shorelines as the preferred alternative for stabilizing tidal shorelines;
- 2. Identify preferred shoreline management approaches for the shoreline types found in the Commonwealth;
- 3. Explain the risks and benefits of protection provided by various shoreline system elements associated with each management option; and
- 4. Recommend procedures to achieve efficiency and effectiveness by the various regulatory entities exercising authority over a shoreline management project.
- D. The Commission shall permit only living shoreline approaches to shoreline management unless the best available science shows that such approaches are not suitable. If the best available science shows that a living shoreline approach is not suitable, the Commission shall require the applicant to incorporate, to the maximum extent possible, elements of living shoreline approaches into permitted projects.

## § 28.2-1301. Powers and duties of the Commission.

- A. The Commission may receive gifts, grants, bequests, and devises of wetlands and money which shall be held for the uses prescribed by the donor, grantor, or testator and in accordance with the provisions of this chapter. The Commission shall manage any wetlands it receives so as to maximize their ecological value as provided in Article 2 (§ 28.2-1503 et seq.) of Chapter 15 of this title.
- B. The Commission shall preserve and prevent the despoliation and destruction of wetlands while accommodating necessary economic development in a manner consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in § 28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including guidelines and minimum standards promulgated by the Commission pursuant to subsection C.
- C. In order to perform its duties under this section and to assist counties, cities, and towns in regulating wetlands, the Commission shall promulgate and periodically update (i) guidelines which that scientifically evaluate vegetated and nonvegetated wetlands by type and describe the consequences of use of these wetlands types and (ii) minimum standards for protection and conservation of wetlands. The Virginia Institute of Marine Science shall provide advice and assistance to the Commission in developing these guidelines and minimum standards by evaluating wetlands by type and continuously maintaining and updating an inventory of vegetated wetlands.
  - D. In developing guidelines, standards, or regulations under this chapter the Commission shall

consult with all affected state agencies. Consistent with other legal rights, consideration shall be given to the unique character of the Commonwealth's tidal wetlands which are essential for the production of marine and inland wildlife, waterfowl, finfish, shellfish and flora; serve as a valuable protective barrier against floods, tidal storms and the erosion of the Commonwealth's shores and soil; are important for the absorption of silt and pollutants; and are important for recreational and aesthetic enjoyment of the people and for the promotion of tourism, navigation and commerce.

§ 28.2-1302. Adoption of wetlands zoning ordinance; terms of ordinance.

Any county, city or town may adopt the following ordinance, which, after October 1, 1992, shall serve as the only wetlands zoning ordinance under which any wetlands board is authorized to operate. Any county, city, or town which has adopted the ordinance prior to October 1, 1992, shall amend the ordinance to conform it to the ordinance contained herein by October 1, 1992.

Wetlands Zoning Ordinance

§ 1. The governing body of \_\_\_\_\_\_, acting pursuant to Chapter 13 (§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia, adopts this ordinance regulating the use and development of wetlands.

§ 2. As used in this ordinance, unless the context requires a different meaning:

"Back Bay and its tributaries" means the following, as shown on the United States Geological Survey Quadrangle Sheets for Virginia Beach, North Bay, and Knotts Island: Back Bay north of the Virginia-North Carolina state line; Capsies Creek north of the Virginia-North Carolina state line; Deal Creek; Devil Creek; Nawney Creek; Redhead Bay, Sand Bay, Shipps Bay, North Bay, and the waters connecting them; Beggars Bridge Creek; Muddy Creek; Ashville Bridge Creek; Hells Point Creek; Black Gut; and all coves, ponds and natural waterways adjacent to or connecting with the above-named bodies of water.

"Commission" means the Virginia Marine Resources Commission.

"Commissioner" means the Commissioner of Marine Resources.

"Governmental activity" means any of the services provided by this.. (county, city, or town) to its citizens for the purpose of maintaining this \_\_\_\_\_\_ (county, city, or town), including but not limited to such services as constructing, repairing and maintaining roads; providing sewage facilities and street lights; supplying and treating water; and constructing public buildings.

"Nonvegetated wetlands" means unvegetated lands lying contiguous to mean low water and between mean low water and mean high water, including those unvegetated areas of Back Bay and its tributaries and the North Landing River and its tributaries subject to flooding by normal and wind tides but not hurricane or tropical storm tides.

"North Landing River and its tributaries" means the following, as shown on the United States Geological Survey Quadrangle Sheets for Pleasant Ridge, Creeds, and Fentress: the North Landing River from the Virginia-North Carolina line to Virginia Highway 165 at North Landing Bridge; the Chesapeake and Albemarle Canal from Virginia Highway 165 at North Landing Bridge to the locks at Great Bridge; and all named and unnamed streams, creeks and rivers flowing into the North Landing River and the Chesapeake and Albemarle Canal except West Neck Creek north of Indian River Road, Pocaty River west of Blackwater Road, Blackwater River west of its forks located at a point approximately 6400 feet due west of the point where Blackwater Road crosses the Blackwater River at the village of Blackwater, and Millbank Creek west of Blackwater Road.

"Person" means any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

"Vegetated wetlands" means lands lying between and contiguous to mean low water and an elevation above mean low water equal to the factor one and one-half times the mean tide range at the site of the proposed project in the county, city, or town in question, and upon which is growing any of the following species: saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), saltgrass (Distichlis spicata), black needlerush (Juncus roemerianus), saltwort (Salicornia spp.), sea lavender (Limonium spp.), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), sea oxeye (Borrichia frutescens), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), sea rocket (Cakile edentula), southern wildrice (Zizaniopsis miliacea), cattail (Typha spp.), three-square (Scirpus spp.), buttonbush (Cephalanthus occidentalis), bald cypress (Taxodium distichum), black gum (Nyssa sylvatica), tupelo (Nyssa aquatica), dock (Rumex spp.), yellow pond lily (Nuphar sp.), marsh fleabane (Pluchea purpurascens), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's tick (Bidens sp.), smartweed (Polygonum sp.), arrowhead (Sagittaria spp.), sweet flag (Acorus calamus), water hemp (Amaranthus cannabinus), reed grass (Phragmites communis), or switch grass (Panicum virgatum).

"Vegetated wetlands of Back Bay and its tributaries" or "vegetated wetlands of the North Landing River and its tributaries" means all marshes subject to flooding by normal and wind tides but not hurricane or tropical storm tides, and upon which is growing any of the following species: saltmarsh cordgrass (Spartina alterniflora), saltmeadow hay (Spartina patens), black needlerush (Juncus roemerianus), marsh elder (Iva frutescens), groundsel bush (Baccharis halimifolia), wax myrtle (Myrica sp.), arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata), big cordgrass (Spartina

cynosuroides), rice cutgrass (Leersia oryzoides), wildrice (Zizania aquatica), bulrush (Scirpus validus), spikerush (Eleocharis sp.), cattail (Typha spp.), three-square (Scirpus spp.), dock (Rumex sp.), smartweed (Polygonum sp.), yellow pond lily (Nuphar sp.), royal fern (Osmunda regalis), marsh hibiscus (Hibiscus moscheutos), beggar's tick (Bidens sp.), arrowhead (Sagittaria sp.), water hemp (Amaranthus cannabinus), reed grass (Phragmites communis), or switch grass (Panicum virgatum).

"Wetlands" means both vegetated and nonvegetated wetlands.

"Wetlands board" or "board" means a board created pursuant to § 28.2-1303 of the Code of Virginia.

§ 3. The following uses of and activities in wetlands are authorized if otherwise permitted by law:

- 1. The construction and maintenance of noncommercial catwalks, piers, boathouses, boat shelters, fences, duckblinds, wildlife management shelters, footbridges, observation decks and shelters and other similar structures, provided that such structures are so constructed on pilings as to permit the reasonably unobstructed flow of the tide and preserve the natural contour of the wetlands;
  - 2. The cultivation and harvesting of shellfish, and worms for bait;
- 3. Noncommercial outdoor recreational activities, including hiking, boating, trapping, hunting, fishing, shellfishing, horseback riding, swimming, skeet and trap shooting, and shooting on shooting preserves, provided that no structure shall be constructed except as permitted in subdivision 1 of this section;
- 4. Other outdoor recreational activities, provided they do not impair the natural functions or alter the natural contour of the wetlands;
  - 5. Grazing, haying, and cultivating and harvesting agricultural, forestry or horticultural products;
- 6. Conservation, repletion and research activities of the Commission, the Virginia Institute of Marine Science, the Department of Game and Inland Fisheries and other conservation-related agencies;
- 7. The construction or maintenance of aids to navigation which are authorized by governmental authority;
- 8. Emergency measures decreed by any duly appointed health officer of a governmental subdivision acting to protect the public health;
- 9. The normal maintenance and repair of, or addition to, presently existing roads, highways, railroad beds, or facilities abutting on or crossing wetlands, provided that no waterway is altered and no additional wetlands are covered;
- 10. Governmental activity in wetlands owned or leased by the Commonwealth or a political subdivision thereof;
- 11. The normal maintenance of man-made drainage ditches, provided that no additional wetlands are covered. This subdivision does not authorize the construction of any drainage ditch; and
- 12. The construction of living shoreline projects authorized pursuant to a general permit developed under subsection B of § 28.2-104.1.
- § 4. A. Any person who desires to use or develop any wetland within this \_\_\_\_\_ (county, city, or town), other than for the purpose of conducting the activities specified in § 3 of this ordinance, shall first file an application for a permit directly with the wetlands board or with the Commission.
- B. The permit application shall include the following: the name and address of the applicant; a detailed description of the proposed activities; a map, drawn to an appropriate and uniform scale, showing the area of wetlands directly affected, the location of the proposed work thereon, the area of existing and proposed fill and excavation, the location, width, depth and length of any proposed channel and disposal area, and the location of all existing and proposed structures, sewage collection and treatment facilities, utility installations, roadways, and other related appurtenances or facilities, including those on adjacent uplands; a statement indicating whether use of a living shoreline as defined in § 28.2-104.1 for a shoreline management practice is not suitable, including reasons for the determination; a description of the type of equipment to be used and the means of equipment access to the activity site; the names and addresses of owners of record of adjacent land and known claimants of water rights in or adjacent to the wetland of whom the applicant has notice; an estimate of cost; the primary purpose of the project; any secondary purposes of the project, including further projects; the public benefit to be derived from the proposed project; a complete description of measures to be taken during and after the alteration to reduce detrimental offsite effects; the completion date of the proposed work, project, or structure; and such additional materials and documentation as the wetlands board may require.
- C. A nonrefundable processing fee shall accompany each permit application. The fee shall be set by the applicable governing body with due regard for the services to be rendered, including the time, skill, and administrator's expense involved.
- § 5. All applications, maps, and documents submitted shall be open for public inspection at the office designated by the applicable governing body and specified in the advertisement for public hearing required under § 6 of this ordinance.
- § 6. Not later than 60 days after receipt of a complete application, the wetlands board shall hold a public hearing on the application. The applicant, local governing body, Commissioner, owner of record of any land adjacent to the wetlands in question, known claimants of water rights in or adjacent to the wetlands in question, the Virginia Institute of Marine Science, the Department of Game and Inland Fisheries, the Water Control Board, the Department of Transportation, and any governmental agency

expressing an interest in the application shall be notified of the hearing. The board shall mail these notices not less than 20 days prior to the date set for the hearing. The wetlands board shall also cause notice of the hearing to be published at least once a week for two weeks prior to such hearing in a newspaper of general circulation in this \_\_\_\_\_\_ (county, city, or town). The published notice shall specify the place or places within this \_\_\_\_\_\_ (county, city, or town) where copies of the application may be examined. The costs of publication shall be paid by the applicant.

§ 7. A. Approval of a permit application shall require the affirmative vote of three members of a

five-member board or four members of a seven-member board.

B. The chairman of the board, or in his absence the acting chairman, may administer oaths and compel the attendance of witnesses. Any person may testify at the public hearing. Each witness at the hearing may submit a concise written statement of his testimony. The board shall make a record of the proceeding, which shall include the application, any written statements of witnesses, a summary of statements of all witnesses, the findings and decision of the board, and the rationale for the decision.

- C. The board shall make its determination within 30 days of the hearing. If the board fails to act within that time, the application shall be deemed approved. Within 48 hours of its determination, the board shall notify the applicant and the Commissioner of its determination. If the board fails to make a determination within the 30-day period, it shall promptly notify the applicant and the Commission that the application is deemed approved. For purposes of this section, "act" means taking a vote on the application. If the application receives less than four affirmative votes from a seven-member board or less than three affirmative votes from a five-member board, the permit shall be denied.
- D. If the board's decision is reviewed or appealed, the board shall transmit the record of its hearing to the Commissioner. Upon a final determination by the Commission, the record shall be returned to the board. The record shall be open for public inspection at the same office as was designated under § 5 of this ordinance.
- § 8. The board may require a reasonable bond or letter of credit in an amount and with surety and conditions satisfactory to it, securing to the Commonwealth compliance with the conditions and limitations set forth in the permit. The board may, after a hearing held pursuant to this ordinance, suspend or revoke a permit if the applicant has failed to comply with any of the conditions or limitations set forth in the permit or has exceeded the scope of the work described in the application. The board may, after a hearing, suspend a permit if the applicant fails to comply with the terms and conditions set forth in the application.
- § 9. In fulfilling its responsibilities under this ordinance, the board shall preserve and prevent the despoliation and destruction of wetlands within its jurisdiction while accommodating necessary economic development in a manner consistent with wetlands preservation and any standards set by the Commonwealth in addition to those identified in § 28.2-1308 to ensure protection of shorelines and sensitive coastal habitats from sea level rise and coastal hazards, including the provisions of guidelines and minimum standards promulgated by the Commission pursuant to § 28.2-1301 of the Code of Virginia.
- § 10. A. In deciding whether to grant, grant in modified form or deny a permit, the board shall consider the following:
  - 1. The testimony of any person in support of or in opposition to the permit application;
  - 2. The impact of the proposed development on the public health, safety, and welfare; and3. The proposed development's conformance with standards prescribed in § 28.2-1308 of the Code of
- Virginia and guidelines promulgated pursuant to § 28.2-1301 of the Code of Virginia.

  B. The board shall grant the permit if all of the following criteria are met:
- 1. The anticipated public and private benefit of the proposed activity exceeds its anticipated public and private detriment.
- 2. The proposed development conforms with the standards prescribed in § 28.2-1308 of the Code of Virginia and guidelines promulgated pursuant to § 28.2-1301 of the Code of Virginia.
- 3. The proposed activity does not violate the purposes and intent of this ordinance or Chapter 13 (§ 28.2-1300 et seq.) of Title 28.2 of the Code of Virginia.
- C. If the board finds that any of the criteria listed in subsection B of this section are not met, the board shall deny the permit application but allow the applicant to resubmit the application in modified form.
- § 11. The permit shall be in writing, signed by the chairman of the board or his authorized representative, and notarized. A copy of the permit shall be transmitted to the Commissioner.
- § 12. No permit shall be granted without an expiration date established by the board. Upon proper application, the board may extend the permit expiration date.
- § 13. No permit granted by a wetlands board shall in any way affect the applicable zoning and land use ordinances of this \_\_\_\_\_ (county, city, or town) or the right of any person to seek compensation for any injury in fact incurred by him because of the proposed activity.

§ 28.2-1308. Standards for use and development of wetlands; utilization of guidelines.

A. The following standards shall apply to the use and development of wetlands and shall be considered in the determination of whether any permit required by this chapter should be granted or

denied:

- 1. Wetlands of primary ecological significance shall not be altered so that the ecological systems in the wetlands are unreasonably disturbed; and
- 2. Development in Tidewater Virginia, to the maximum extent practical, shall be concentrated in wetlands of lesser ecological significance, in vegetated wetlands which have been irreversibly disturbed before July 1, 1972, in nonvegetated wetlands which have been irreversibly disturbed prior to January 1, 1983, and in areas of Tidewater Virginia outside of wetlands.
- B. The provisions of guidelines *and minimum standards* promulgated by the Commission pursuant to § 28.2-1301 shall be considered in applying the standards listed in subsection A of this section.
- C. When any activity authorized by a permit issued pursuant to this chapter is conditioned upon compensatory mitigation for adverse impacts to wetlands, the applicant may be permitted to satisfy all or part of such mitigation requirements by the purchase or use of credits from any wetlands mitigation bank, including any banks owned by the permit applicant, that has been approved and is operating in accordance with applicable federal and state guidance, laws, or regulations for the establishment, use and operation of mitigation banks as long as (i) the bank is in the same fourth order subbasin, as defined by the hydrologic unit boundaries of the National Watershed Boundary Dataset or by the hydrologic unit system or dataset utilized and depicted or described in the bank's approved mitigation banking instrument, as the impacted site, or in an adjacent subbasin within the same river watershed, as the impacted site, or it meets all the conditions found in clauses (a) through (d) and either clause (e) or (f) of this subsection; (ii) the bank is ecologically preferable to practicable on-site and off-site individual mitigation options, as defined by federal wetland regulations; and (iii) the banking instrument, if approved after July 1, 1996, has been approved by a process that included public review and comment. When the bank is not located in the same subbasin or adjacent subbasin within the same river watershed as the impacted site, the purchase or use of credits shall not be allowed unless the applicant demonstrates to the satisfaction of the Commission that (a) the impacts will occur as a result of a Virginia Department of Transportation linear project or as the result of a locality project for a locality whose jurisdiction encompasses multiple river watersheds; (b) there is no practical same river watershed mitigation alternative; (c) the impacts are less than one acre in a single and complete project within a subbasin; (d) there is no significant harm to water quality or fish and wildlife resources within the river watershed of the impacted site; and either (e) impacts within the Chesapeake Bay watershed are mitigated within the Chesapeake Bay watershed as close as possible to the impacted site or (f) impacts within subbasins 02080108, 02080208, and 03010205, as defined by the National Watershed Boundary Dataset, are mitigated in-kind within those subbasins as close as possible to the impacted site. After July 1, 2002, the provisions of clause (f) shall apply only to impacts within subdivisions of the listed subbasins where overlapping watersheds exist, as determined by the Department of Environmental Quality, provided the Department has made such a determination by that date. For the purposes of this subsection, the hydrologic unit boundaries of the National Watershed Boundary Dataset or other hydrologic unit system may be adjusted by the Department of Environmental Quality to reflect site-specific geographic or hydrologic information provided by the bank sponsor.
- D. Where an agreed-upon permit condition requires the contribution of in-lieu fees to offset permitted wetland losses, the wetlands board shall credit the applicant for any in-lieu fee payments made to the Virginia Aquatic Resources Trust Fund or another dedicated wetlands restoration fund with reference to the same activity.

For the purposes of this section, "river watershed" means the Potomac River Basin, Shenandoah River Basin, James River Basin, Rappahannock River Basin, Roanoke and Yadkin Rivers Basin, Chowan River Basin (including the Dismal Swamp and Albemarle Sound), Tennessee River Basin, Big Sandy River Basin, Chesapeake Bay and its Small Coastal Basins, Atlantic Ocean, York River Basin, and the New River Basin.