Chesapeake Bay Preservation Act

Tidal Wetlands Board Training

October 9, 2026



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Office of Watersheds and Local
Government Assistance Programs

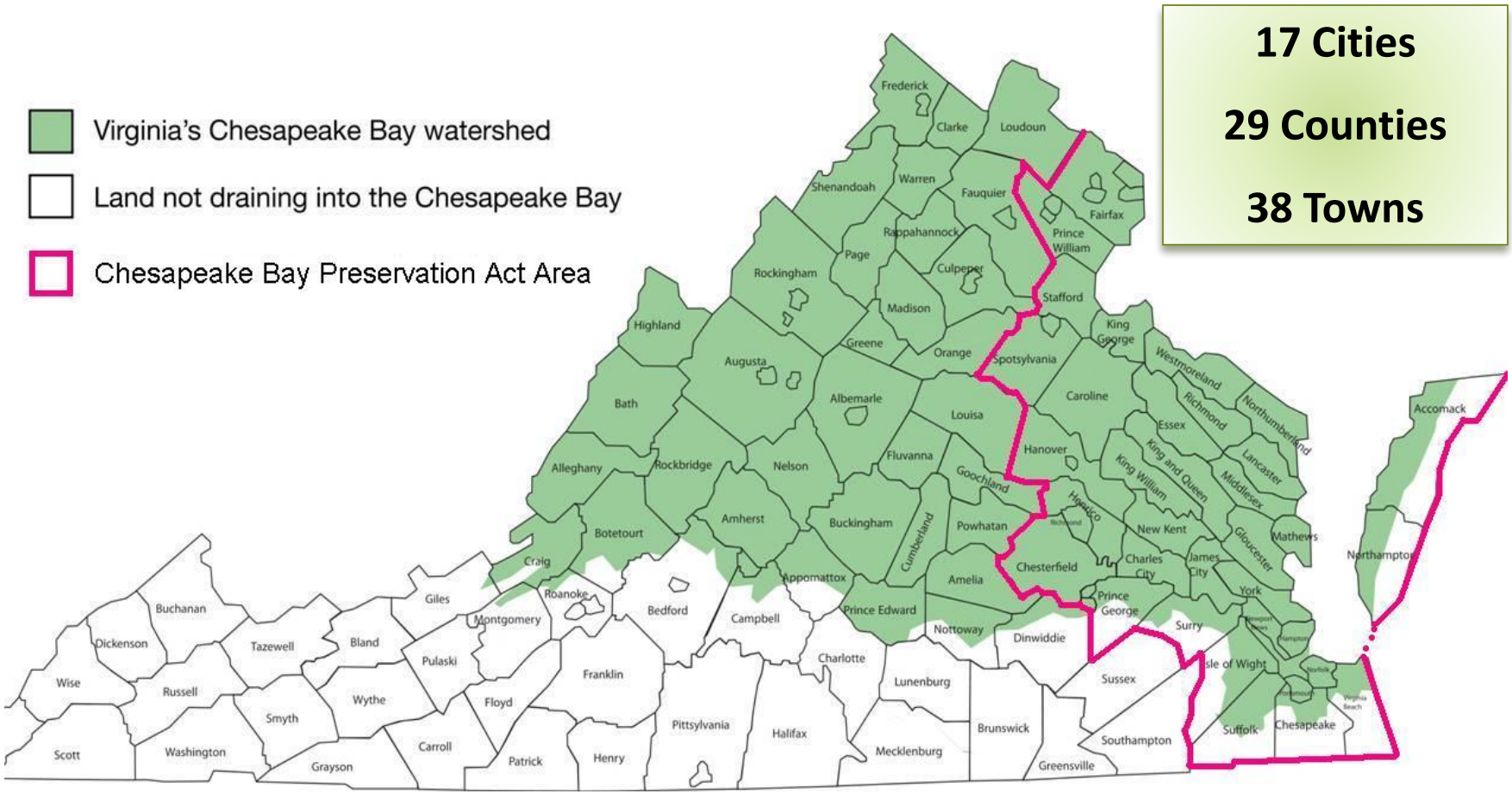
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Chesapeake Bay Preservation Act

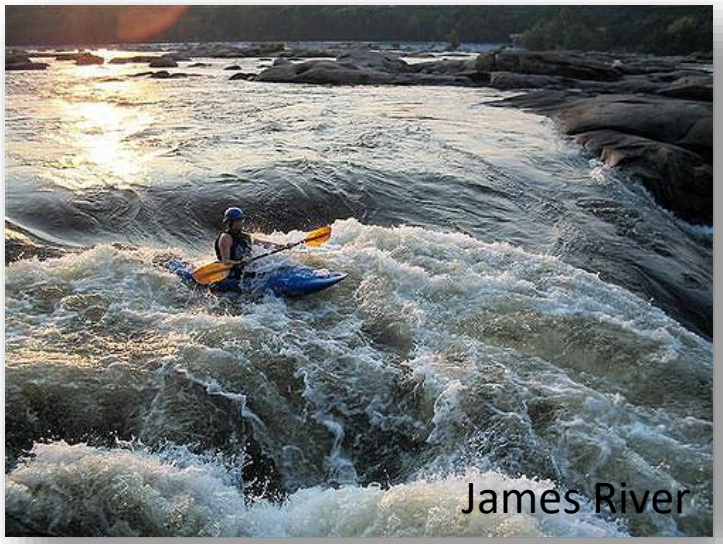
"Healthy state and local economies and a healthy Chesapeake Bay are integrally related; balanced economic development and water quality protection are not mutually exclusive."

- State mandated, but locally implemented
- Comprehensive, enforceable nonpoint source pollution prevention program
- Uses local land use tools already in place to limit and place performance criteria on sensitive environmental features in our landscape
- Avoids or reduces water quality impacts that could result in mitigation for lost or damaged resources
- Preserves existing vegetation, including mature trees, and limits land disturbance and impervious surfaces
- Advances coastal resiliency

Chesapeake Bay Watershed and Bay Act Localities



Local Program Requirements



Identify and map Chesapeake Bay Preservation Areas (CBPAs)

- Resource Protection Areas (RPAs)
- Resource Management Areas (RMAs)
- Intensely Developed Areas (IDAs)

Incorporate performance criteria – water quality protection measures – into plans, ordinances, and policies

- Comprehensive Plan
- Zoning Ordinance
- Subdivision Ordinance
- Plan of development review process



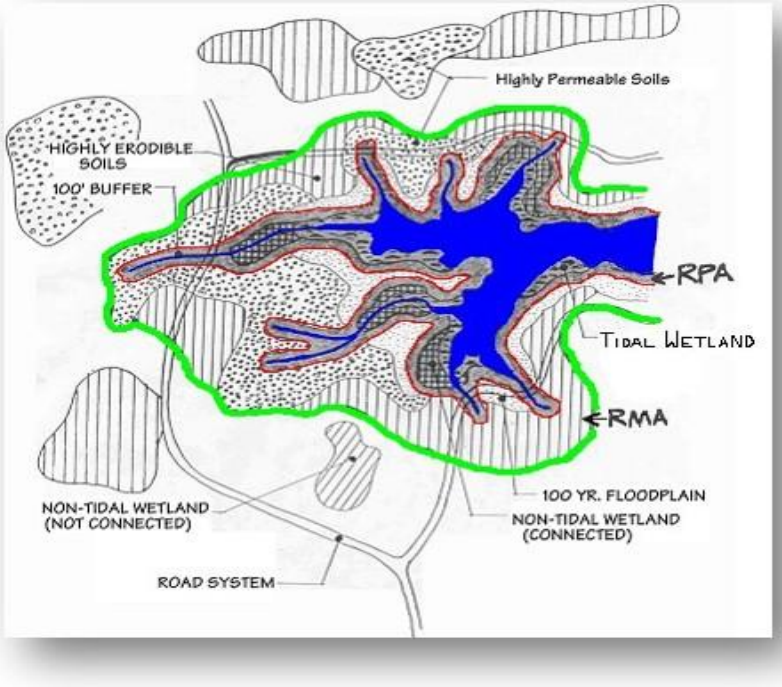
Local Bay Act Program Website

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Chesapeake Bay Preservation Areas

Resource Protection Areas (RPA)

- Tidal wetlands and shores
- Nontidal wetlands connected by surface flow and contiguous to water bodies with perennial flow
- 100’ vegetated buffer adjacent to above features and along both sides of any water body with perennial flow
- Limited activities permitted, strict performance criteria for development

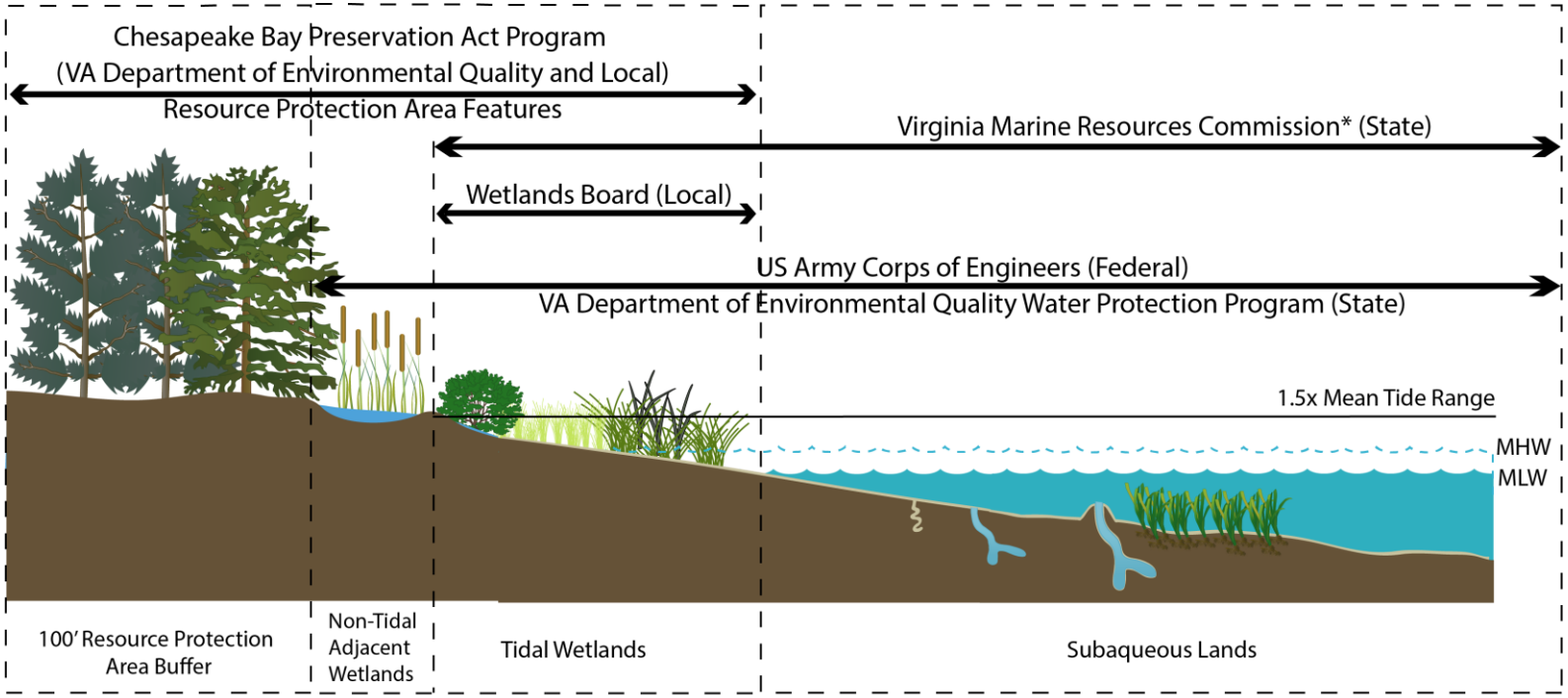


Resource Management Areas (RMA)

- Includes land types that have a potential for causing water quality degradation or for diminishing the functional value of the RPA
- Contiguous to the inland boundary of the RPA
- Permits all uses and activities permitted by zoning
- Land categories included in RMAs: 100-year floodplains, highly erodible and permeable soils, steep slopes, nontidal wetlands not included as RPA, 500’ buffer from the edge of any RPA or 600’ from the landward edge of a stream or water body where perenniality has not been determined.

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Jurisdiction Interplay



* VMRC has oversight authority for the Tidal Wetlands Act and administers the Act in localities without a wetlands zoning ordinance and local wetlands board.

Virginia Shorezone Jurisdictions: legally defined shoreline resources and the relevant local, state and federal authorities. Note that some authorities cross resource boundaries and most resources have at least two responsible regulatory authorities. Symbols courtesy of the Integration and Application Network (ian.umces.edu/symbols/), University of Maryland Center for Environmental Science.

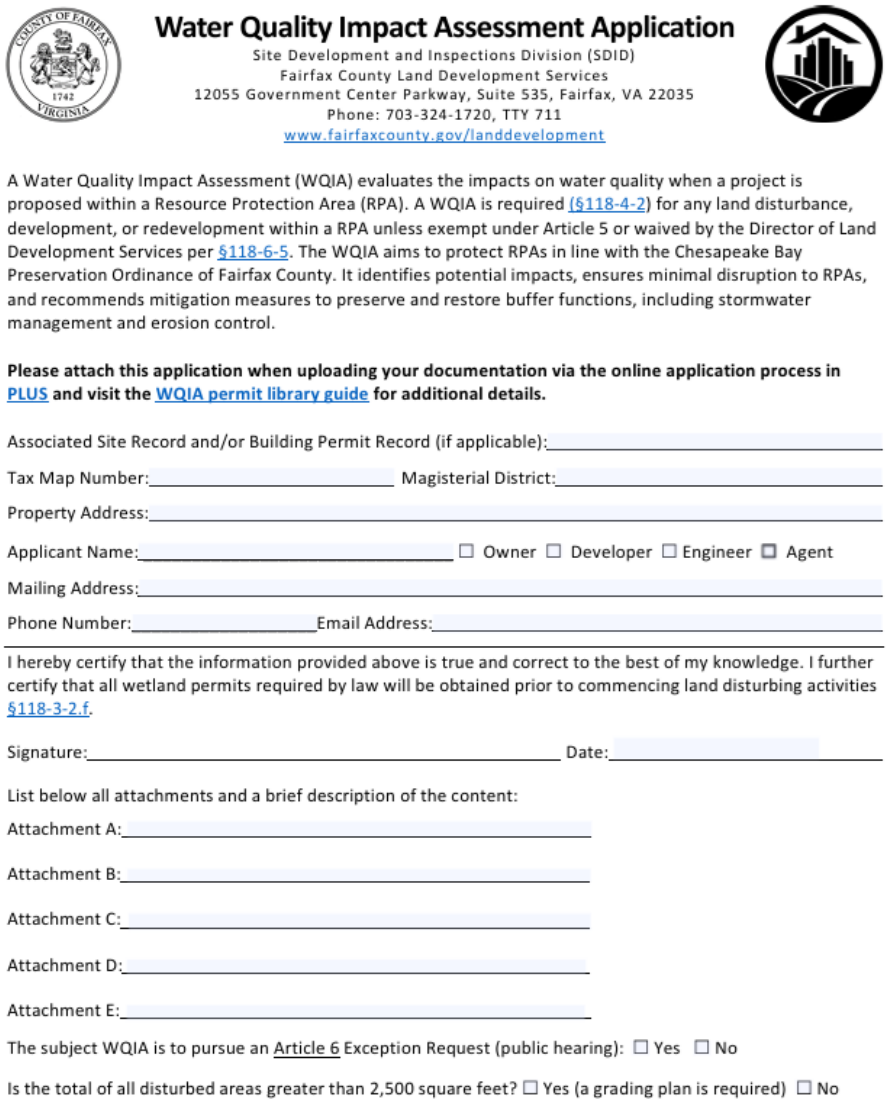
General Performance Criteria

Applied to all land development within CBPAs

- Minimize land disturbance
- Preserve indigenous vegetation including mature tree protection
- Minimize impervious surfaces
- E&S and stormwater management requirements apply for land disturbance >2,500 SF
- Plan of development review process required >2,500 SF

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RPA Performance Criteria



Water Quality Impact Assessment Application

Site Development and Inspections Division (SDID)
Fairfax County Land Development Services
12055 Government Center Parkway, Suite 535, Fairfax, VA 22035
Phone: 703-324-1720, TTY 711
www.fairfaxcounty.gov/landdevelopment

A Water Quality Impact Assessment (WQIA) evaluates the impacts on water quality when a project is proposed within a Resource Protection Area (RPA). A WQIA is required (§118-4-2) for any land disturbance, development, or redevelopment within a RPA unless exempt under Article 5 or waived by the Director of Land Development Services per §118-6-5. The WQIA aims to protect RPAs in line with the Chesapeake Bay Preservation Ordinance of Fairfax County. It identifies potential impacts, ensures minimal disruption to RPAs, and recommends mitigation measures to preserve and restore buffer functions, including stormwater management and erosion control.

Please attach this application when uploading your documentation via the online application process in PLUS and visit the WQIA permit library guide for additional details.

Associated Site Record and/or Building Permit Record (if applicable):_____

Tax Map Number:_____ Magisterial District:_____

Property Address:_____

Applicant Name:_____ ☐ Owner ☐ Developer ☐ Engineer ☐ Agent

Mailing Address:_____

Phone Number:_____Email Address:_____

I hereby certify that the information provided above is true and correct to the best of my knowledge. I further certify that all wetland permits required by law will be obtained prior to commencing land disturbing activities §118-3-2.f.

Signature:_____ Date:_____

List below all attachments and a brief description of the content:

Attachment A:_____

Attachment B:_____

Attachment C:_____

Attachment D:_____

Attachment E:_____

The subject WQIA is to pursue an Article 6 Exception Request (public hearing): ☐ Yes ☐ No

Is the total of all disturbed areas greater than 2,500 square feet? ☐ Yes (a grading plan is required) ☐ No

- Activities within the RPA are limited and require local government approval, either administrative or an exception.
- If Bay Act map indicates CBPA on the parcel, a site-specific RPA determination required.
- Proposed land disturbance within the RPA requires a Water Quality Impact Assessment (including mitigation for area of land disturbance) and a Resiliency Assessment.

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Mitigation for Land Disturbance in RPA Buffer

Restoration/Establishment Table A

A. 1/4 acre or less of buffer
(Up to 10,890 square feet or less of buffer area.)

For every 400 square-foot unit (20'x20') or fraction thereof, plant:

one (1) canopy tree @ 1Y2" - 2" caliper or large evergreen @ 6' *two (2)* understory trees @ 3/4" – 1 Y2" caliper or evergreen @ 4' or *one* (1) understory tree and *two* (2) large shrubs @ 3'-4' *three (3)* small shrubs or woody groundcover @ 15" – 18"

Example:
A 100-foot wide lot x 100-foot wide buffer is 10,000 square feet. Divide by 400 square feet (20'x20' unit) to get:
25 units

Units	x plant/unit	Number of plants
25 units x	1 canopy tree	25 canopy trees
	2 understory trees	50 understory trees
	3 small shrubs	75 small shrubs
		150 plants

Riparian Buffers Modification & Mitigation Guidance Manual



Restoration/Establishment Table B

Greater than 1/4 acre of buffer
More than 10,890 square feet

A. Plant at the same rate as for 1/4 acre or less.

B. The waterside 50% of the buffer (from the waterline inland for the first 50 feet): For every 400 square-foot unit (20'x20') or fraction thereof plant:

one (1) canopy tree @ 1'A" - 2" caliper or large evergreen @ 6'
two (2) understory trees @ 3/4" – 1 'A" caliper or evergreen @ 4'
or *one* (1) understory tree and *two* (2) large shrubs @ 3'-4' *three (3)* small shrubs or woody groundcover @ 15" – 18"
AND

The landward 50% of buffer (from 50 feet inland to 100 feet inland):
either plant
Bare root seedlings or whips at 1,210 stems per acre[1], approximately 6'x6' on center (Minimum survival required after two growing seasons: 600 plants)
or
Container grown seedling tubes at 700 per acre approximately 8'x 8' on center (Minimum survival required after two growing seasons: 490 plants)

C. If the applicant is willing to enter into a five year maintenance and performance guarantee: 100% of buffer planted with:
Bare root seedlings or whips at 1,210 per acre, approximately 6'x 6' on center (Minimum survival required after two growing seasons: 600 plants)
or
Container grown seedling tubes at 700 per acre approximately 8'x 8' on center (Minimum survival required after two growing seasons: 490 plants)

1 acre or more of buffer

With an evaluation from an arborist or forester or other professional, natural regeneration may be an acceptable method of buffer establishment, however, a forestry management plan must be in place prior to any vegetation being removed. A minimum of 35 feet next to the water must be left in forest and protected prior to any vegetation being removed. If over 20 percent of the vegetation must be removed for the health of the woodlot, within the 35 feet closest to the shore-line, vegetation must be reestablished by seedling plantings at the rates above.

[1] Palone, Roxanne S., and Al Todd, *Chesapeake Bay riparian handbook: A guide for establishing and maintaining riparian forest buffers.* May 1977. p. 7-20.

- Area of land disturbance w/i RPA / 400 SF = 1 planting unit
- Each planting unit = 1 canopy and 2 understory trees + 3 small shrubs

Riparian Buffers Modification & Mitigation Manual, Appendix D

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Permitted Uses within RPA



- New or expanded water dependent uses (but not non-water dependent components – pools, clubhouses, parking)
- Redevelopment of existing structures (no increase in impervious cover and no further encroachment into RPA)
- New primary structure + utilities on a pre-Bay Act lot
- Private roads and driveways
- Regional flood control and stormwater facilities

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Permitted Buffer Modifications in RPA

(no structures, generally)





Administrative approval

(by local staff)

- Sight lines and vistas
- Private access paths
- Management of a vegetated buffer
- Shoreline erosion control projects
- Adaptation Measures (NEW)

**Requires WQIA and mitigation for area of land disturbance in the RPA.

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Shoreline Erosion Control

"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."

9 VAC 25-830-140 5 a (4)

- 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," permits and conditions.
- VIMS/VMRC/Wetlands Board and Tidal Wetlands Guidelines provide best technical advice



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Shoreline Erosion Control

Local governments shall ensure that any activity in the Resource Protection Area is consistent with Chapter 13 Title 28.2, Code of Virginia, and the accompanying Tidal Wetlands Guidelines which provide for "minimum standards for the protection and conservation of wetlands," and "ensure protection of shorelines and sensitive coastal habitat from sea level rise and coastal hazard."

Shoreline management and alteration projects should be coordinated to address the requirements of the most updated Tidal Wetlands Guidelines in conjunction with the requirements of this chapter, including subdivision 5 a (4) of 9VAC25-830-140.
9VAC25-830-155(D)

- "Mature trees shall be removed only as necessary for the installation and maintenance of the project, consistent with the best available technical advice project plans, and applicable permit conditions or requirements.
  - Trees shall be utilized in the project when vegetation is being established as appropriate to the site conditions and project specifications.
  - Inclusion of native species in tree planting is preferred."
- Any land disturbance in the 100-foot RPA buffer requires a Water Quality Impact Assessment and vegetative mitigation.
- The WQIA can account for any improvement in water quality from wetlands plantings and erosion control

Adaptation Measures

"Adaptation measure" means a project, practice, or approach to mitigate or address an impact of climate change including sea-level rise, storm surge, and flooding including increased or recurrent flooding

Must Be:

- Nature-Based solution
- Chesapeake Bay Program Partnership BMP
- Virginia Stormwater BMP
- Shoreline Protection Strategy (VMRC); or
- Eligible activity for funding by the Virginia Community Flood Preparedness Fund

Must Also:

- Maximize preservation of existing natural vegetation, including mature trees
- Minimize land disturbance
- Be designed, installed, and maintained in accordance with specifications
- Comply with other Bay Act requirements

Incorporate Adaptation Measures

Allows for the use of fill with conditions:

- Grading and slope
- Support growth of vegetation
- Address and manage stormwater run-off
- Not negatively impact septic systems and drainfields; and
- Be consistent with any applicable federal or state law, including floodplain management requirements

Connection with Tidal Wetlands Guidelines & Existing Provisions

Adaptation Measures
9 VAC 25-830-155

- Nature-based solution
- Specific requirements:
  - Stormwater BMP
  - Chesapeake Bay BMP
  - Shoreline Protection Strategy (VMRC)
  - VA Community Flood Preparedness Fund eligible (DCR)

Shoreline Erosion Control
9 VAC 25-830-140

- VMRC Tidal Wetlands Guidelines apply
- Living Shoreline - Default
- Hardened Shoreline Activity requires “active, detrimental erosion” + Living Shoreline not possible
- Hierarchy of options including rip rap revetments, seawalls, bulkheads
- Must be approved by VMRC

RPA Exceptions

Formal Exceptions:

- Relief from performance criteria for
  - Encroachments into the RPA for any use not otherwise permitted (by-right, exempt)
  - Accessory structures & uses: detached decks or garages, pools, gazebos, patios, sheds, etc.
  - Encroachment into the seaward 50’ of the buffer
- WQIA + mitigation for area of land disturbance in RPA
- May be granted by a local review body following public notice and public hearing
- Must meet the required findings and be approved with reasonable conditions, including mitigation



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Resiliency in Bay Act Development

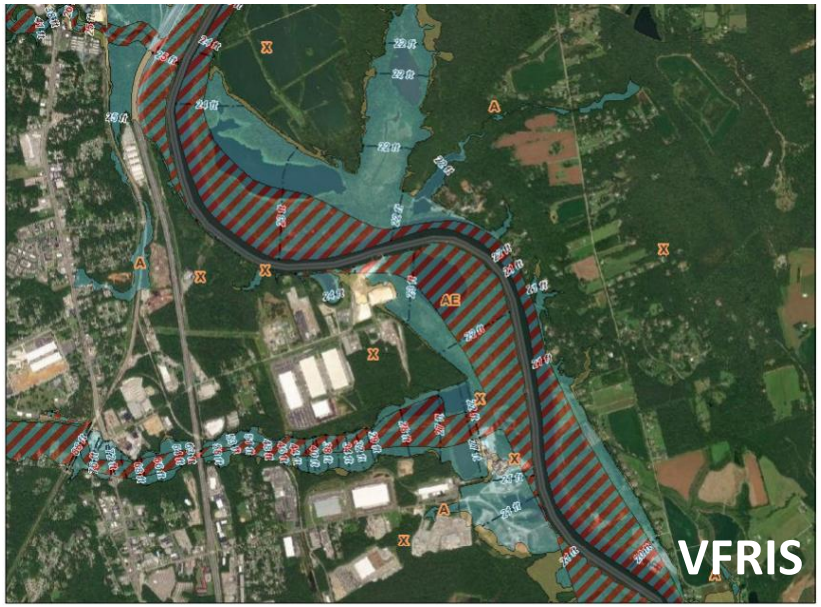
Coastal Resiliency Statutory Amendment

- Virginia Code § 62.1-44.15:72 required the State Water Control Board (Board) to develop criteria enabling local governments to encourage and promote "coastal resilience and adaptation to sea-level rise and climate change" through their Bay Act programs by requiring a resiliency assessment be conducted to understand the impacts of climate change and sea level rise on any proposed land development within RPAs, based on a potential impact range of Localities *"shall assess the impacts of climate change and sea level rise on proposed land development in the RPA…"*
  - Incorporated into the plan of development or project review process
  - Based upon RPA as delineated at time of proposed development
  - Based upon a period of 30 years, or lifespan of the project
  - Use a model or forecast developed by or on behalf of Commonwealth
  - Assess potential impacts on buffer function in light of proposed project
  - Identify conditions, alterations or adaptation measures to address potential impacts

Resiliency Assessment Models & Forecasting

- The Resiliency Assessment is to be based upon a model or forecast used or developed by or on behalf of Commonwealth
- Current models / forecasts include:





- Virginia Flood Risk Information System: https://consapps.dcr.virginia.gov/VFRIS/
- AdaptVA: http://adaptva.org/

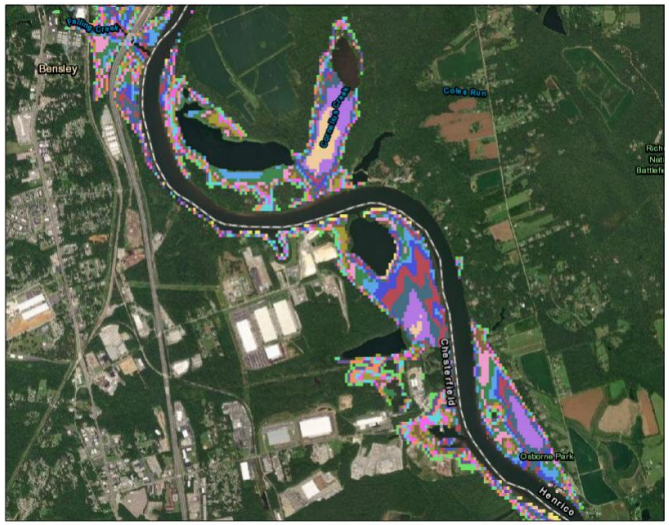
Resiliency Assessment Models & Forecasting

Scope of Impacts

- Sea-Level Rise (AdaptVA)
  - 2017 NOAA Intermediate High Curve
- Storm Surge
  - NOAA SLOSH Model
- Flooding (VFRIS)
  - Special Flood Hazard Area (SFHA)
  - Limit of Moderate Wave Action (LiMWA)



2050 Storm Surge – Cat 1

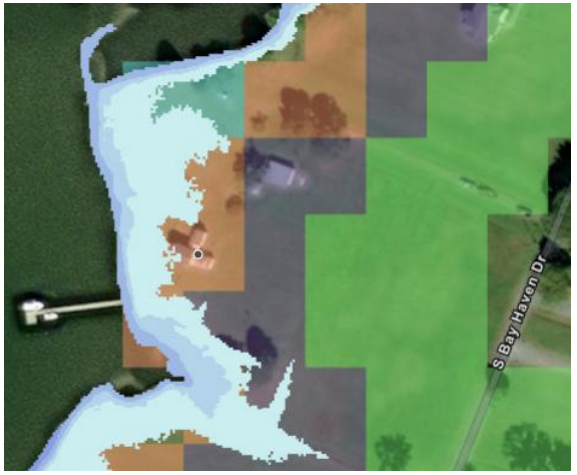


2050 Storm Surge – Cat 3

Resiliency Assessment Results

- Assess potential impacts in light of proposed development on buffer function
- Identify conditions, alterations to the project, or adaptation measures, as necessary and appropriate
- Can be incorporated into a Water Quality Impact Assessment
- Can be conducted either by the local government or by applicant
- *"Based upon the assessment, local governments shall, as necessary and appropriate, require conditions, alterations, or the installation of adaptation measures as part of the proposed land development…"*





Exception Limitations

Local governments shall not grant exceptions to the General Performance Criteria and RPA Development Criteria requirements where:

- A Resiliency Assessment has not been conducted; or
- An Adaptation Measure proposes the use of fill in a RPA in contravention of the required conditions.

Bay Act Take Aways

- The primary focus of the Bay Act program is the 100’ required buffer along tidal waters and wetlands
- The key elements of Bay Act is RPA land disturbance is only allowed for certain activity: permitted development (water dependent facility) or buffer modifications (adaptation measure/shoreline erosion control project)
- Land disturbance/buffer impact through WQIA must be assessed



Harmony and coordination is key

Water quality protection should be the shared goal

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Questions?



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