



# County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

## Final Minutes

### Meeting of the Chesapeake Bay Exception Review Committee

February 5, 2020, 2:00 PM  
Herrity Building, Room 941  
12055 Government Center Parkway  
Fairfax, Virginia 22035

#### Present

##### Committee:

Anne S. Kanter, James C. Chesley, Sue Kovach Shuman, Edward W. Monroe, Jr., Dr. David Schnare, Elizabeth Martin, Amy Gould, Som Govender.

##### County Staff:

Danielle Badra, Brandy Mueller, Camylyn Lewis, Jerry Stonefield, Bruce McGranahan, John Friedman, Ellie Coddling, Marc Gori, Keyona Green, Hugh Whitehead.

#### Committee Members Absent

Ken Lanfear.

#### Call to Order

Meeting called to order by Vice Chair Elizabeth Martin at: 2:02 PM

#### ERC Business

1. Review of the March 6, 2019 minutes:
  - a. Motion was made by Schnare to approve the minutes. The motion was seconded by Chesley and approved 6-0 with 1 abstention.
2. Welcome new ERC member: Som Govender
  - a. Works for Fairfax County Park Authority. Representing Sully District.
3. Election of Officers:
  - a. Martin mentioned her interest in becoming the new Chair of the ERC.
  - b. Kanter nominated Martin as Chair of the ERC. The nomination was seconded by Schnare.
  - c. Nominations for Chair closed after hearing no other nominations. The nomination of Martin as Chair of ERC was approved 7-0.



- d. Martin nominated Monroe to Vice Chair of the ERC. The nomination was seconded by Kanter. Nominations for Vice Chair closed after hearing no other nominations. The nomination of Monroe as Vice Chair of ERC was approved 7-0.
- e. Martin nominated Shuman to Secretary of the ERC, seconded by Kanter. Nominations for Secretary closed after hearing no other nominations. The nomination of Shuman as Secretary of ERC was approved 8-0.
4. Schnare raised the issue of there being two vacancies on the ERC for the Lee and Mason districts. Schnare suggested that committee members write to the Supervisors of Lee and Mason districts reminding them to nominate someone for each district.
5. Martin reminded the ERC that according to the ERC By-Laws Article 3, Section 3.b., the ERC may seek professional advice on a case-by-case basis. The problem is that there is a tight timeframe for review of applications and unless the case is deferred, there usually isn't time to obtain further input.
  - a. A suggestion was made that a professional instead come to the public hearing to provide input on specific applications, as a member of the public.

#### Committee Matters

1. Update on Woodlark Case presented by Marc Gori
  - a. Gori updated the committee on the status of the Woodlark case. A two-day trial is set for mid-June. Gori will inform the clerk to the ERC of the exact trial date to share with the other members. Gori advised against discussing the Woodlark case or any active exception review cases outside of scheduled committee meetings.
2. RPA Buffers Amendment ([Attachment 1](#)) presented by John Friedman
  - a. Schnare informed the ERC that Friedman helped to write the Chesapeake Bay Preservation Ordinance.
  - b. Friedman passed out a PowerPoint presentation ([Attachment 2](#)) on the proposed RPA Buffers Amendment ([Attachment 1](#)) text, which was previously emailed out to the committee.
  - c. Friedman will keep the ERC informed about when the BOS public hearings are scheduled for this amendment.
  - d. Friedman explained that anyone who submits a plan to LDS for review uses the guidelines in the PFM.
  - e. Friedman has been vetting the amendment. Consulted with the State. Going to the Tree Commission, Environmental Quality Advisory Committee, Engineering Standards Review Committee, and ERC.
  - f. Concerns were raised about the number of planting holes and potential die-off that would occur in order to meet the planting requirements of this amendment.
  - g. Friedman explained that one of the reasons for the reduction in the number of shrubs to be planted is to prevent having a ruined acre filled with holes.
  - h. Definition of "Native" species included in the amendment text.

- i. Concerns were raised that this amendment does not tell people specifically which trees to use.
- j. Friedman explained that there are lists of the acceptable trees species available but that they didn't want to include an exclusive list of trees in the amendment because there may be alternatives available outside of a restrictive list. Thus, the amendment provides more options/flexibility.
- k. Mueller mentioned that the county does have a list of recommended plantings for RPA located on the Chesapeake Bay Preservation Ordinance website. Whenever stormwater planning approves a plan, they attach that document.
- l. Concerns were raised that the PFM is just a guidance document, so how will this amendment be enforceable?
- m. Mueller answered that the Code dictates to plant in accordance with the PFM. If there is a violation and they don't replant according to the PFM, then they are still in violation and enforcement happens.
- n. Schnare suggested including information about the fiscal impact of this amendment somewhere in the board package.
- o. Friedman responded that while there is a fiscal impact, it can be minimal depending on the type of plantings selected.
- p. What does "control" mean in the phrase "Control of non-native plant species must be controlled"?
- q. Friedman and Whitehead explained that control basically means "removal, if deemed necessary." There are other ways to stabilize the soil if you remove the invasive species.
- r. Martin asked if Friedman needed anything from the committee.
- s. Friedman suggested to write up any individual comments and send them through the clerk to the ERC.

### ERC Business

1. Schnare mentioned the possibility of no longer accepting staff recommendations on the exception review application packages. Proposed the language, "Henceforth, all staff reports on applications shall not include a staff recommendation."
  - a. It was resolved that this is not currently a possibility since staff is required by ordinance to forward the application with a staff recommendation. The code states, in part, at 118-6-1, that the Director shall forward such exception requests with recommendation for denial or approval.
2. Mueller agreed to forward the LTI on Water Quality Impact Assessments to the committee.
3. Schnare mentioned the issue of sheds requiring an exception review case. The language that required this has been removed from the county website, but nothing has been done to revise or replace that language. It is technically still enforceable.

- a. Staff agreed to forward Schnare's concerns to the SDID Director, Bruce McGranahan, for further consideration.
4. Martin asked, "Are there any exception review cases coming down the pike?"
  - a. Mueller responded that there are none in an acceptable position. There are 6 right now that are potentially headed in that direction, but none are ready for submission.
5. Gould asked Mueller to give an update on an outstanding violation issued at 8211 Little River Turnpike.
  - a. Mueller stated the owner had recently resubmitted their Water Quality Impact Assessment to the county for review and that her staff continues to perform routine E&S inspections. She also mentioned staff from Stormwater Planning Division monitors the site for illicit discharge after heavy rain events, with no issues yet.
  - b. Mueller confirms this violation will ultimately require review by the ERC.
6. Motion was made by Kanter to adjourn. The motion was seconded and approved unanimously.

#### Next Meeting

No meeting date was set.

#### Adjournment

Motion from Kanter to adjourn at 4:10 PM. The motion was seconded and approved 8-0.

Attachment 1

**Proposed Amendment to Chapter 12 (Tree Conservation)  
of  
the Public Facilities Manual**

**Amend Section 12-0316 (Requirements and Specifications for Replacement Trees and/or Vegetation), by revising Subsection 12-0316.4 and adding Table 12.13 to read as follows:**

- 12-0316.4 ~~When RPAs have been disturbed without prior approval by the Director, or are proposed to be disturbed as part of a construction plan, buffer areas must be restored or created as required under Chapter 118 of the Code and § 6-0000 *et seq.*, and planting must be consistent with Performance Criteria found in the “Riparian Buffers Guidance and Mitigation Guidance Manual” published by the Division of Chesapeake Bay Local Assistance, Virginia Department of Conservation and Recreation. At least 25 percent of the area must be planted with trees as specified in § 12-0316.2. In addition, one seedling as specified in § 12-0505.5 must be planted for each 100 square feet of disturbed area and one shrub with a minimum height of 18 inches must be planted for each 100 square feet of disturbed area. Soil preparation, soil amendments, and/or seed mix is required as determined by the Director. The surface area associated with these plantings may be used to meet 10-year Tree Canopy requirements when being planted to offset allowable disturbances to RPAs. RPA Establishment and Restoration. When RPAs are to be established or restored (see [Chapter 118](#) of the Code), plantings must include a mix of: overstory trees; understory trees; shrubs or shrubs with non-woody shrub equivalents; and both annual and perennial herbaceous seed mixes for groundcover planted at the densities listed in [Table 12.13](#) and in accordance with the following:~~
- A. Stock sizes must conform to the [American Standard for Nursery Stock \(ANSI Z60.1](#) current edition).
  - B. Large caliper trees may not be planted on slopes steeper than 2:1.
  - C. Plant materials from each of the required categories must be placed throughout the buffer.
  - D. Plants and perennial seed mixes must be species native to Fairfax County, tolerant of site conditions and non-invasive. Native species are those known to occur naturally (i.e., not assisted by human movement) within 100 miles of Fairfax County. Wetland plant species should be used where warranted by site conditions.
  - E. If non-native invasive plant species (NNIs) are present in the RPA and are likely to affect establishment or growth of plantings, control of NNIs must be included in the RPA planting plan.

- F. Undisturbed areas within an RPA to be restored should not be replanted or included in the planting density computations, except that if NNIs are to be removed, adequate ground cover must be established.
- G. For partially disturbed areas (e.g., some trees remain), planting densities may be adjusted with approval by the Director.
- H. The Director may require additional or more specific plantings to correct violations of [Chapter 118](#) of the Code.

<b>Table 12.13 Planting Density per acre for RPA Establishment or Restoration</b>					
<b>A. Trees<sup>1</sup></b>					
	1.5-in. Caliper <sup>2</sup>	¾-in. Caliper <sup>2</sup>	Gallon Pot <sup>3</sup>	Tubelings <sup>4</sup>	Bareroot Seedlings <sup>5</sup>
Overstory Trees	109	164	218	400	1,210 <sup>7</sup>
Understory Trees <sup>6</sup>	N/A	218	435	800	
<p>1. Any overstory tree size may be paired with any understory tree size. Overstory trees and understory trees do not have to be the same size and more than one size of overstory tree and understory tree may be used. Using a 1-acre site as an example, a planting plan could specify 109 1.5-inch caliper overstory trees, 109 ¾-inch caliper understory trees and 218 1-gallon pot understory trees.</p> <p>2. Tree caliper is measured at 6 inches above ground as specified in <a href="#">ANSI Z60.1</a>.</p> <p>3. A gallon pot contains approximately 1 gallon of soil, equivalent to a #1 or #2 container size in accordance with <a href="#">ANSI Z60.1</a>.</p> <p>4. A tubeling is a tree grown from seed and offered for sale in plastic "plug" containers. Plants can vary in age from 1 to 4 years.</p> <p>5. Bareroot seedlings may only be used with approval by the Director. A bareroot seedling is a tree grown from seed but sold without soil. Plants can vary in age from 1 to 4 years.</p> <p>6. Up to 25% of the understory trees may be composed of overstory species.</p> <p>7. Combined total of understory trees and overstory trees.</p> <p>8. The recommended planting window is November 1 through April 15 when the ground is not frozen (after first hard frost and before bud break).</p>					
<b>B. Shrubs</b>					
	12-24 in. tall in a 1 gallon or larger pot <sup>1</sup>				
Shrubs	654				
Non-Woody Shrub Equivalents <sup>2</sup>	2,616				
<p>1. A gallon pot contains approximately 1 gallon of soil, equivalent to a #1 or #2 container size in accordance with <a href="#">ANSI Z60.1</a>.</p> <p>2. Up to 25% of the shrub layer may be composed of non-woody shrub equivalents. Non-woody shrub equivalents are herbaceous plants that perform a niche function otherwise</p>					

occupied by shrubs. Using a 1.2-acre site as an example, 589 (0.9-acre x 654/acre) shrubs and 785 (0.3-acre x 2,616/acre) non-woody shrub equivalents would be required.

3. The recommended planting window for shrubs is November 1 through April 15 when the ground is not frozen (after first hard frost and before bud break).
4. The recommended planting window for non-woody shrub equivalents is September 1 through October 31 and March 1 through May 15.

C. Groundcover<sup>1</sup>

	Pure Live Seed
Perennial Herbaceous Seed Mix <sup>2</sup> (minimum of 12 species)	30 lbs.
Annual Herbaceous Cover Crop Seed Mix <sup>2</sup> (1-2 species)	60 lbs.

1. Other types of groundcover such as leaf litter or mulch may be approved by the Director.
2. An herbaceous seed mix is a seed mix of perennial and/or annual grasses and flowers.
3. The recommended planting window for the perennial herbaceous seed mix is September 1 through October 31 and March 1 through May 15.
4. Annual herbaceous cover crop seed mixes may be planted year-round.

Attachment 2



# **Draft Resource Protection Area (RPA) Planting Requirements**

Chesapeake Bay Exception Review Committee

John Friedman  
Land Development Services  
February 5, 2020



## Today's Discussion

- Status of Amendments
- Background
- Draft Standards
- Going Forward

## Status of Amendments

- The original advertised amendments to Chapter 118 (Chesapeake Bay Preservation Ordinance) were not adopted.
- At the public hearing on November 19, 2019, the Board directed that the amendments be re-advertised with related amendments to Chapter 12 (Tree Conservation) of the PFM at a later date.
- The amendments to Chapter 12 have been drafted by LDS staff in collaboration with DPWES staff from the Urban Forest Management and Stormwater Planning Divisions.
- Roll-out to stakeholders has begun.
- The schedule for re-advertising has not been set.

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## Background

- Currently, both the ordinance and the PFM include planting densities for RPAs.
- The planting densities and computational methods in the ordinance and PFM are different.
- The state's *Riparian Buffers Modification & Mitigation Guidance Manual* (Guidance Manual) published in 2003, also has recommended planting densities. The manual is referenced in the PFM.

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## Background

- The planting density for trees is approximately the same in all three sources, the ordinance, the PFM and the Guidance Manual.
- The density of shrubs in the PFM is much less than what the ordinance requires but it's still greater than the recommended density in the Guidance Manual.
- The PFM uses 10-YR tree cover for 25% of the area to determine the number of caliper sized trees required to be planted with 75% of the area planted with seedlings.
- The ordinance uses stems/acre.

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## Background

- What is the purpose of the amendments?

Reconcile the differences between the requirements in the ordinance and the PFM and have all the requirements in one location.

- Why locate the requirements in the PFM?

The PFM is the best place for the density requirements because it includes all of the standards for field practice, which are not included in the ordinance, needed to implement RPA planting plans.

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## Existing Standards

### Chapter 118

Trees – 100 2” caliper overstory trees and 200 2” caliper understory trees per acre  
or  
200 overstory tree seedlings and 400 understory tree seedlings per acre

Shrubs<sup>1</sup> – 1089 18” tall shrubs (size per PFM) per acre

Groundcover<sup>2</sup> – seed mix of grasses and perennials or wetland plants and/or seed mix of wetland plants as determined by the Director (per PFM); the application rate of seed is not specified

1. The ordinance doesn’t specify the size of shrubs but it does require the use of plant materials as specified in the PFM. The use of 18” tall shrubs is assumed based on PFM requirements
2. The ordinance doesn’t specify the type of groundcover or application rate for ground cover if seed is used but does require use of plant materials as specified in the PFM.

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## Existing Standards

### PFM

Trees<sup>1</sup> – 25% of area planted with a mix of 2” caliper overstory and understory trees based on 10-yr tree cover  
plus

Remaining 75% of area planted with bareroot seedlings at 436 plants/acre

Shrubs – 436 18” tall shrubs per acre

Groundcover – Seed mix of grasses and perennials or wetland plants and/or seed mix of wetland plants as determined by the Director

1. The PFM doesn’t specify any specific breakdown between understory and overstory trees for the 2” caliper trees but it would be reasonable to assume a 2:1 ratio based on the ratio in the ordinance and the state’s Guidance Manual.

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## Revised Standards

### What do the revised RPA planting requirements look like?

- Planting densities will be located in the PFM.
- Planting densities are based on local experience with stream restoration projects.
- Four components:  
 1) overstory trees; 2) understory trees; 3) shrubs and 4) groundcover.
- Include additional planting options (e.g. tree caliper sizes).
- All planting densities trees and shrubs expressed as stems/acre.

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## Revised Standards

### Trees (stems/ac.)

	1.5" caliper	3/4" caliper	1 gal. pot	Tubelings	Bareroot Seedlings <sup>1</sup>
Overstory Trees <sup>2</sup>	109	164	218	400	1,200
Understory Trees <sup>2</sup>	N/A	218	435	800	

1. Bareroot seedlings may only be used with approval by the Director.
2. Any overstory tree size may be paired with any understory tree size.
3. The existing ordinance calls for 100 2.0" caliper overstory trees and 200 2.0" caliper understory trees or 200 overstory seedlings and 400 understory seedlings.
4. Highlighted numbers are the same as the Guidance Manual.

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## Revised Standards

### Shrubs

(stems/ac.)

	12-24 in. tall in a 1 gallon or larger pot
Woody Shrubs	654
Non-woody Shrub Equivalents <sup>1</sup>	2,616

1. Up to 25% of the shrub layer may be composed of non-woody shrub equivalents. Non-woody shrub equivalents are herbaceous plants such as ferns and vines that perform a niche function otherwise occupied by shrubs.
2. The existing ordinance requires 1089 shrubs; the current PFM requires 436 shrubs; and the state’s Guidance Manual requires 327 shrubs.

## Revised Standards

### Groundcover

	Pure Live Seed
Perennial Herbaceous Seed Mix (minimum of 12 species)	30 lbs.
Annual Herbaceous Cover Crop Seed Mix (1-2 species)	60 lbs.

1. Other types of groundcover such as mulch may be approved by the Director.
2. An herbaceous seed mix is a seed mix of perennial and/or annual grasses and flowers. The perennial mix is used for permanent groundcover and the annual seed mix is used for immediate soil stabilization.
3. The existing ordinance doesn’t specify the type of groundcover or application rate for ground cover if seed is used but does require use of plant materials as specified in the PFM. The PFM specifies that the application rate be determined by the Director.

## Example

1.5 acres of the RPA has been disturbed; how do you determine the number of trees and shrubs that need to be planted?

- Let's start with the trees. You need to plant both overstory and understory trees.
- First select one or more sizes of overstory trees.
- For our example, we will use 1.5" caliper size trees to meet 30% of the requirement and 1 gal. pot size trees to meet 70% of the requirement:

**109** 1.5" caliper size overstory trees per acre X **0.30** X **1.5** acres = **49 trees**

**218** 1 gal. pot size overstory trees per acre X **0.70** X **1.5** acres = **229 trees**

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## Example (continued)

- Now we need to select one or more sizes of understory trees.
- For our example, we will use 3/4" caliper size trees to meet 40% of the requirement and 1 gal. pot size trees to meet 60% of the requirement:

**218** 3/4" caliper size understory trees per acre X **0.40** X **1.5** acres = **131 trees**

**435** 1 gal. pot size understory trees per acre X **0.60** X **1.5** acres = **392 trees**

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## Example (continued)

For the 1.5 acres of disturbed RPA we will be planting:

- **49** - 1.5" caliper size overstory trees
- **229** - 1 gal. pot size overstory trees
- **131** - 3/4" caliper size understory trees
- **392** - 1 gal. pot size understory trees

**A total of 801 trees**

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## Example (continued)

The next step is to determine the number of shrubs that need to be planted

- Decide if you want to use non-woody shrub equivalents for a portion of the requirement but no more than 25%.
- For our example, we will use woody shrubs to meet 85% of the requirement and non-woody shrub equivalents to meet 15% of the requirement:

**654** woody shrubs per acre X **0.85** X **1.5** acres = **834 woody shrubs**

**2,616** non-woody shrub equivalents per acre X **0.15** X **1.5** acres = **589 non-woody shrub equivalents**

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## Example (continued)

Finally, we need to determine the amount of herbaceous seed mix that needs to be planted.

- **30 pounds of perennial seed mix per acre X 1.5 acres = 45 pounds**
- **60 pounds of annual seed mix per acre X 1.5 acres = 90 pounds**

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## Example (continued)

Summary - to revegetate our 1.5 acre RPA buffer we will be planting:

1.5" caliper overstory trees	49
1 gal. pot overstory trees	229
3/4" caliper understory trees	131
1 gal. pot understory trees	392
woody shrubs	834
non-woody shrub equivalents	589
perennial herbaceous seed mix	45 pounds
annual herbaceous cover crop seed mix	90 pounds

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## Going Forward

- Present revised standards to the Tree Commission, EQAC etc.
- Assemble all of the stakeholder comments and revise the amendments as needed.
- Send revised amendments to DEQ for preliminary OK.
- Bring the revised PFM amendments to the ESRC for approval.

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## Going Forward

- Board Re-authorization of amendments to Ch 118 and PFM.
- Planning Commission hearing and recommendation.
- Board hearing and adoption.

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## Questions?

**For more information:**

**Contact:**

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**Send comments through your staff liaison**