



Resource Protection Area (RPA) Planting Density Requirements

Land Use Policy Committee

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RPA Planting Density Requirements: Status

Status

- In final development - authorization Spring 2021.
- Draft Public Facilities Manual (PFM) amendment is posted on the Land Development Services (LDS) website:
<https://www.fairfaxcounty.gov/landdevelopment/public-facilities-manual-and-code-amendments>

Background

- The Chesapeake Bay Preservation Ordinance (Ch. 118) and the PFM include required planting densities for RPAs. They are different.
- In 2019, the Board authorized advertisement of an amendment to Ch. 118 to replace the planting densities in the ordinance with a requirement pointing to the PFM's planting densities.



RPA Planting Density Requirements: Background

- The plan was to adopt the Ch. 118 amendment and update planting density requirements in the PFM later.
- The Board, on recommendation of the Planning Commission (PC), directed that the amendment to Ch. 118 be re-advertised with related amendments to Chapter 12 (Tree Conservation) of the PFM.
- The main issue was that the revised planting density requirements were not available for review at the time of the hearings.



RPA Planting Density Requirements: Background

- Updated planting densities were developed with the Stormwater Planning Division (SWPPD) and Urban Forest Management Division (UFMD) of the Department of Public Works and Environmental Services (DPWES).
- Draft PFM amendment has been vetted with:
 - Environmental Quality Advisory Council (EQAC)
 - Engineering Standards Review Committee (ESRC)
 - Chesapeake Bay Exceptions Review Committee (ERC)
 - Tree Commission
 - PC Environment Committee
- Draft PFM amendment has been reviewed by the Virginia Department of Environmental Quality (DEQ).



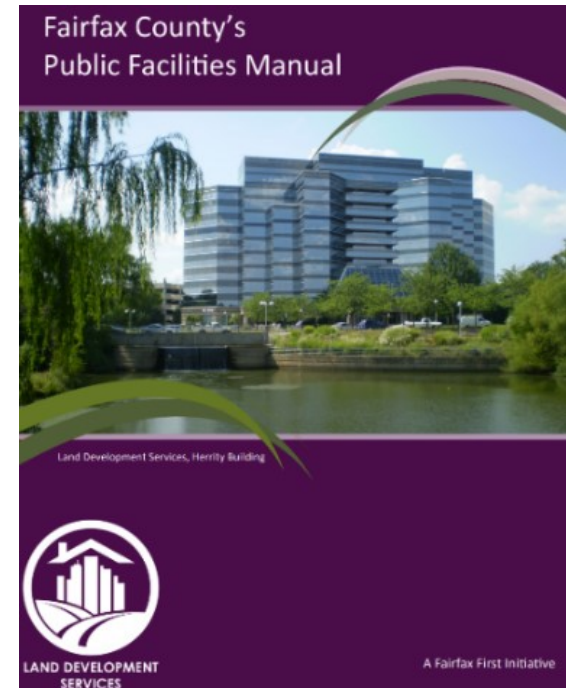
RPA Planting Density Requirements: Goals

Goals

- Eliminate differences between Ch. 118 and PFM requirements.
- Locate all requirements in one place.
- Clarify the requirements and provide additional guidance.

Why locate the requirements in the PFM?

- PFM includes standards for field practice needed to implement RPA planting plans.



RPA Planting Density Requirements: Proposed Requirements

- Planting densities are based on experience and monitoring data from DPWES stream restoration and reforestation projects.

- Five components:

1. overstory trees
2. understory trees
3. shrubs
4. permanent groundcover
5. temporary groundcover



- There are multiple options for the size of trees that may be planted to meet the requirements.

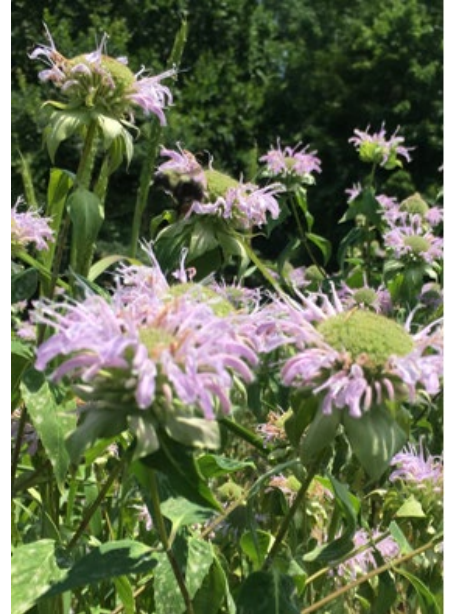
RPA Planting Density Requirements: Proposed Requirements

- As the size decreases, the number of trees to be planted increases.
- Largest size overstory tree option is reduced from 2 in. to 1.5 in.
- Largest size understory tree option is reduced from 2 in. to 3/4 in.
- Significant reduction in the number of shrubs required from 1,089 to 654.



RPA Planting Density Requirements: Proposed Requirements

- Additional planting options combined with the reduced number of shrubs will result in significant cost savings.
- All plants, except for temporary groundcover, must be native species.
- Digital Atlas of Virginia Flora is used for identifying native plant species.
- Chesapeake Bay Preservation Ordinance website will include guidance on planting density computations and how to prepare planting plans to meet the requirements.



RPA Planting Density Requirements

Available Planting Options (all values are stems per acre)

Pick one planting option per line

Element	Planting Density Options				
Overstory Trees	109 (1.5 in. caliper)	164 (3/4 in. caliper)	218 (1 gal. pot)	400 Tubelings	1,200 Bareroot Seedlings
Understory Trees	218 (3/4 in. caliper)		435 (1 gal. pot)	800 Tubelings	Dir. Approval only
Shrubs	654 (18-in. tall)		491 Shrubs (18-in. tall) + 654 Shrub-equivalents (1 qt. pot)		
Permanent Ground Cover	30 lbs. Perennial Herbaceous Seed Mix (minimum 12 species)				
Temporary Ground Cover	60 lbs. Annual Herbaceous Cover Crop Seed Mix (minimum 3 species)				

Highlighted values from the Virginia (VA) Riparian Buffers Modification & Mitigation Guidance Manual

Comparison Table of Proposed versus Existing RPA Planting Density Requirements

Element	Proposed PFM	Existing Ch. 118	Existing PFM	Existing DEQ Guidance
Overstory Trees	109 (1.5 in. caliper)	100 (2 in. caliper)	86 (2 in. caliper) + 327 seedlings	109 (1.5 in. caliper)
Understory Trees	218 (¾ in. caliper)	200 (2 in. caliper)	86 (2 in. caliper) + 327 seedlings	218 (¾ in. caliper)
Shrubs	654 (18 in. tall)	1,089 (18 in. tall)	436 (18 in. tall)	327 (18 in. tall)
Permanent Ground Cover	30 lbs. Perennial Herbaceous Seed	Type and application rate not specified	Mix of grasses and perennials application rate not specified	Type and application rate not specified
Temporary Ground Cover	60 lbs. Annual Herbaceous Cover Crop Seed Mix	Type and application rate not specified	Per VA Erosion & Sedimentation Handbook	Type and application rate not specified

RPA Planting Density Requirements: Summary

- Planting densities from Ch. 118 and the PFM will be consolidated in the PFM
- Planting densities were developed in co-ordination with UFMD and SWPD.
- Planting densities are based on experience and monitoring data from DPWES stream restoration and reforestation projects.
- Additional planting options using smaller sized trees combined with the reduced number of shrubs will result in significant cost savings.
- Projected authorization is Spring 2021.

