



# *Draft FOREST CONSERVATION MANUAL*



Howard County Department of Planning & Zoning  
November 2020

# *Forest Conservation Manual*

- ◆ Technical manual that establishes how the Forest Conservation Act will be implemented
- ◆ Explains FCA requirements and gives technical guidance for preparing plans, protecting forest and planting new forests
- ◆ Adopted by Resolution of the County Council

# *Forest Conservation Act*

- ◆ State program established December 1991
  - ❖ DNR-Forest Service administers program statewide
  - ❖ Reviews state and federally funded projects
  - ❖ Delegates authority to towns, cities and counties that have local programs
- ◆ Objectives
  - ❖ Retain forests in sensitive environmental areas
  - ❖ Slow the loss of forests in Maryland



# *Forest Conservation Act*

- ◆ County program established January 1993
  - ❖ No significant changes since 1999
- ◆ Major update to Act in 2019
  - ❖ Adopt State law changes
  - ❖ Increased retention of forests and more successful forest plantings
  - ❖ Improved waiver process
  - ❖ Increased fee-in-lieu



# *Definition of Forest*

- ◆ A biological community dominated by **native** trees and other woody plants covering a land area 10,000 square feet or larger
- ◆ Minimum width of 35' **for an existing forest and 50' for a planted forest**
- ◆ Areas that have at least 100 trees/acre with at least 50% having a 2" or larger diameter at 4.5 ' above the ground
- ◆ Forest areas that have been cut but not cleared

# *Applicability*

- ◆ Affects most land development proposals on lots of 40,000 sq ft or larger
- ◆ Exemptions
  - ❖ Planned unit development approved prior to Dec 31, 1992 including Columbia New Town
  - ❖ Agriculture, unless clearing more than 40,000 sq ft of forest within a one-year period
  - ❖ Routine maintenance of existing roads and public utility rights-of-way

# *Applicability*

- ◆ Compliance trigger for non-agricultural activity is now clearing more than 20,000 sq ft of forest
- ◆ **New Exemptions**
  - ❖ Previously developed area covered by an impervious surface and located in the Planned Service Area
  - ❖ Maintenance or retrofit of stormwater management structure
  - ❖ Stream restoration project

# *Forest Conservation Act*

- ◆ Encourages **retention** of existing forests
- ◆ Mandates thresholds and ratios for replacement of forests cleared during development (**reforestation**)
- ◆ Requires minimum forest cover (**afforestation**)
- ◆ Protects forests with long term easements
- ◆ Allows fee-in-lieu for alternative compliance



# Thresholds

Land Use Type	Reforestation Threshold	Afforestation Threshold
Residential-Rural Low Density	50%	20%
Residential-Rural Med. Density	25%	20%
Residential-Suburban Density	20%	15%
Institutional or Linear	20%	15%
Retail, Industrial or Office	15%	15%
Mixed Use Development or Planned Unit Development	20%	15%

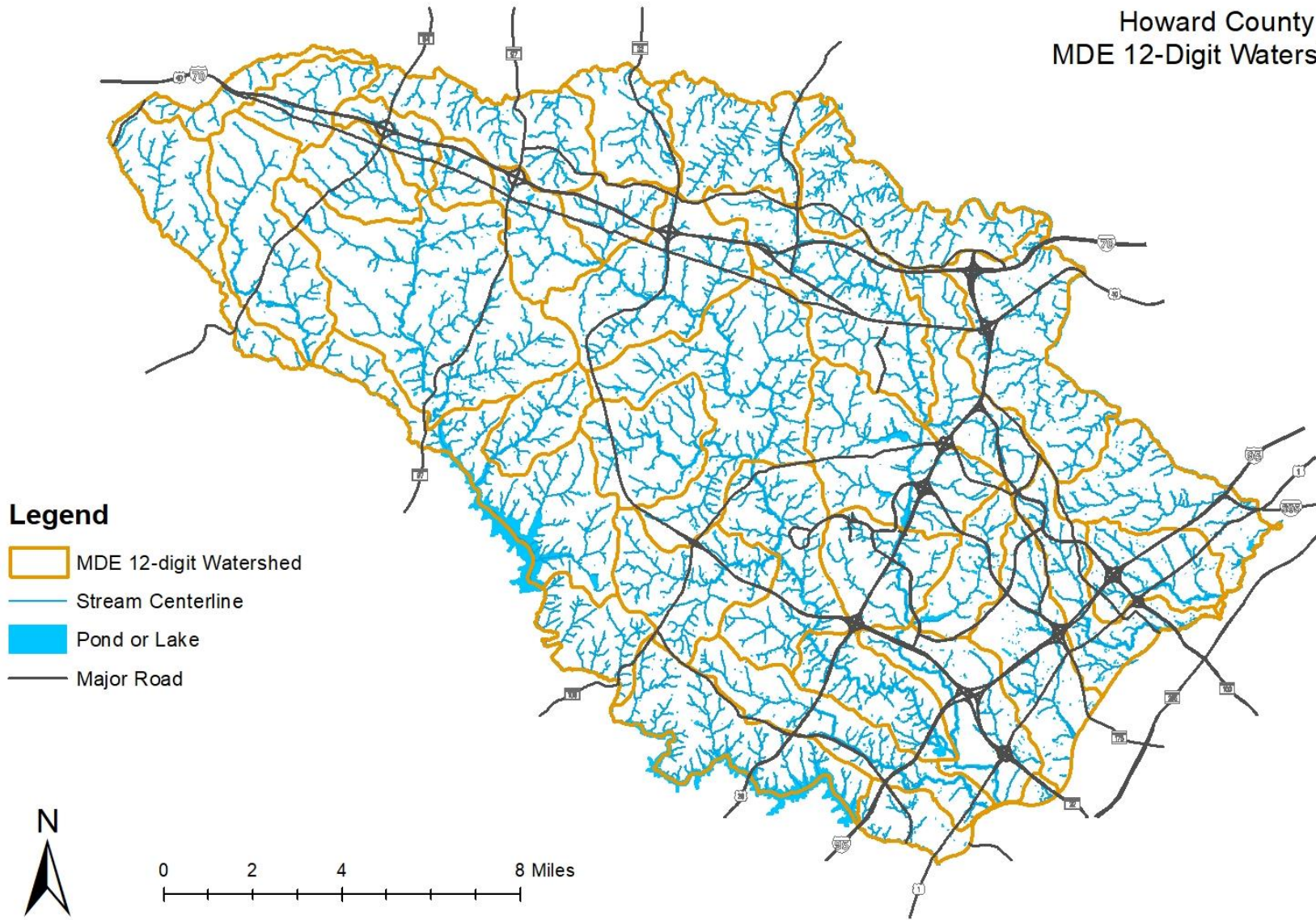
# Reforestation Thresholds

- ◆ Clearing forest down to threshold
  - ❖ Reforest  $\frac{1}{2}$  acre per acre cleared **inside watershed**
  - ❖ **1 acre per acre cleared outside watershed**
- ◆ Clearing forest below threshold
  - ❖ reforest 2 acres per acre cleared **inside watershed**
  - ❖ **3 acres per acre cleared outside watershed**
- ◆ Retaining forest above threshold
  - ❖ 1 acre credit per acre retained
- ◆ Break-even point (no reforestation)
  - ❖ save **33%** of forest above threshold





# *Afforestation Thresholds*

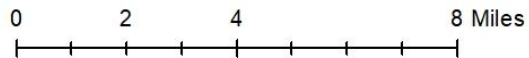
- ◆ Clearing forest below threshold
  - ❖ Afforest 2 acres per acre cleared for mitigation *inside watershed*
  - ❖ Afforest 3 acres per acre cleared for mitigation *outside watershed*
- ◆ Plus any afforestation to meet minimum threshold

# Howard County MDE 12-Digit Watersheds



## Legend

-  MDE 12-digit Watershed
-  Stream Centerline
-  Pond or Lake
-  Major Road



Path: G:\01 Draw\ESRI\MapX\Projects\HCD\Final\_Conserve\Map\FCA\_MDE12digitWatersheds.mxd



**FOREST CONSERVATION WORKSHEET FOR \_\_\_\_\_**

**Net Tract Area**

- A. Total (Gross) Tract Area A = 0.0
- B. Area within 100-year Floodplain B = 0.0
- C. Other Deductions (Identify: \_\_\_\_\_) C = 0.0
- D. Net Tract Area D = 0.0

**Land Use Category**

Insert the number "1" under the appropriate land use (limit to only one entry)

Resid. Rural LD	Resid. Rural MD	Resid. Suburban	Inst./ Linear	Retail/Ind./ Office	Mixed Use/ PUD
0	0	0	0	0	0

- E. Afforestation Threshold (Net Tract Area x 0% ) E = 0.0
- F. Reforestation Threshold (Net Tract Area x 0% ) F = 0.0

**Existing Forest Cover**

- G. Existing Forest Cover within the Net Tract Area G = 0.0
- H. Area of Forest above Afforestation Threshold H = 0.0
- I. Area of Forest above Reforestation Threshold I = 0.0

**Break Even Point**

- J. Break Even Point J = 0.0
- K. Forest Clearing Permitted without Mitigation K = 0.0

**Proposed Forest Clearing**

- L. Total Area of Forest to be Cleared L = 0.0
- M. Total Area of Forest to be Retained M = 0.0

**Planting Requirements Inside Watershed**

- N. Reforestation for Clearing above the Reforestation Threshold N = 0.0
- P. Reforestation for Clearing below the Reforestation Threshold P = 0.0
- Q. Credit for Retention above the Reforestation Threshold Q = 0.0
- R. Total Reforestation Required R = 0.0
- S. Total Afforestation Required S = 0.0
- T. Total Reforestation and Afforestation Requirement T = 0.0
- U. 75% of Total Obligation (Retention + Planting) U = 0.0
- V. Planting Required Onsite to meet 75% Obligation V = 0.0

**Planting Requirements Outside Watershed**

- W. Total Planting within Development Site Watershed W = 0.0
- X. Total Afforestation Required X = 0.0
- Y. Remaining Planting within Watershed for Reforestation Credit Y = 0.0
- Z. Reforestation for Clearing above the Reforestation Threshold Z = 0.0
- AA. Reforestation for Clearing below the Reforestation Threshold AA = 0.0
- BB. Credit for Retention above the Reforestation Threshold BB = 0.0
- CC. Total Reforestation Required CC = 0.0
- DD. Total Afforestation and Reforestation Requirement DD = 0.0

Date: \_\_\_\_\_

# *Forest Stand Delineation*

- ◆ Inventory existing forest resources
- ◆ Identify sensitive environmental areas
- ◆ Maps, inventory tables and written description of forest stands
- ◆ Guide for decisions about forest conservation
- ◆ *Valid for 5 years*
- ◆ *May only be prepared by a licensed forester or landscape architect, or certified arborist/State qualified professional*

# *Forest Conservation Plan*

- ◆ Calculation of mitigation obligations
- ◆ Maps of retention and planting areas
- ◆ Planting specifications and installation details
- ◆ Construction & post-construction management plans



# *Priority Retention Areas*

- ◆ *Green Infrastructure Network*
- ◆ 100-year floodplains
- ◆ Stream buffers
- ◆ Wetlands and their buffers
- ◆ Critical habitats and wildlife corridors
- ◆ Steep slopes *and highly erodible soils*
- ◆ *Forests contiguous with priority areas listed above*
- ◆ *Forest contiguous with protected off-site forests*
- ◆ Property line and right-of-way buffers

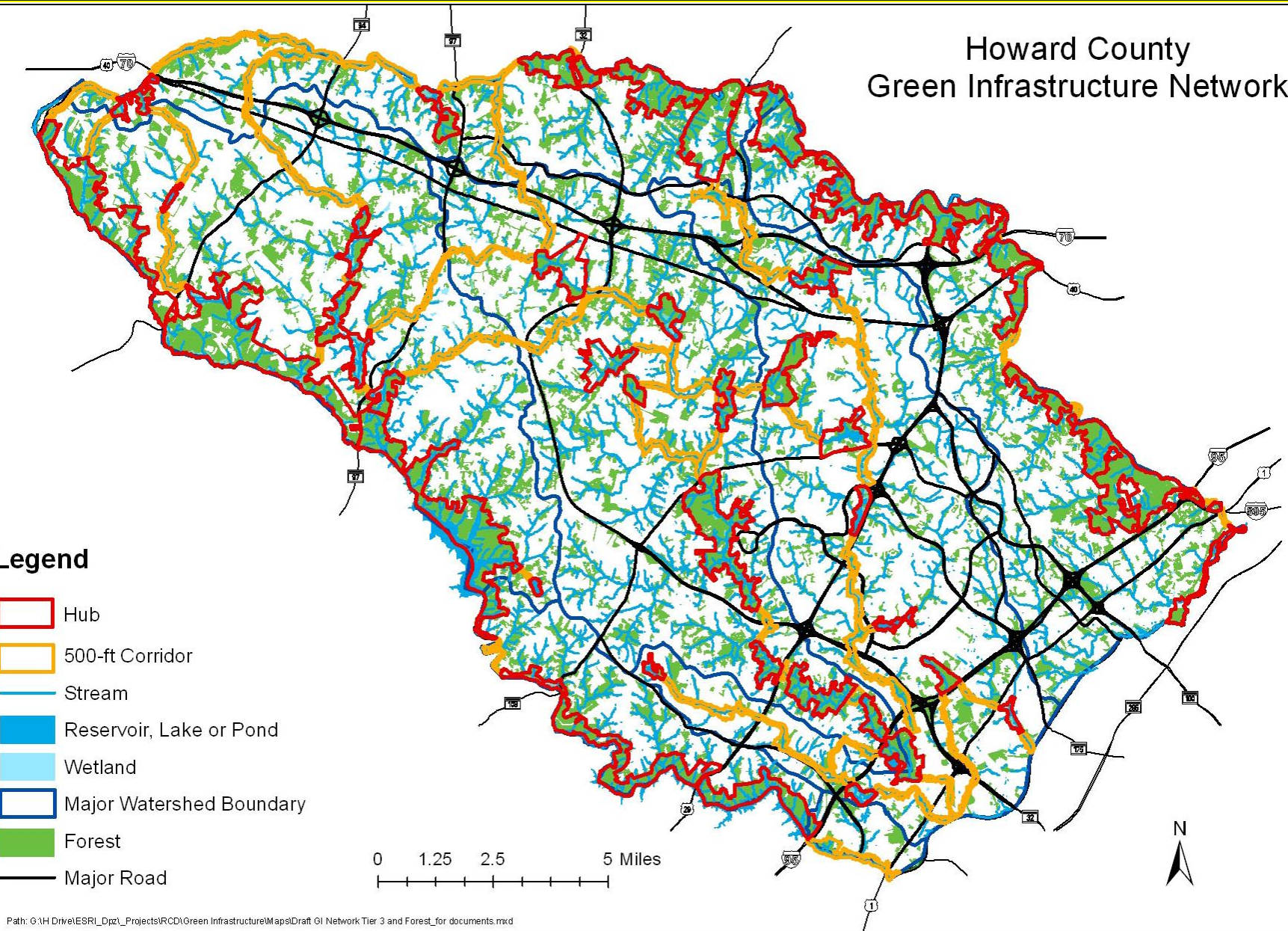
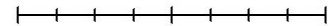


# Howard County Green Infrastructure Network

## Legend

- Hub
- 500-ft Corridor
- Stream
- Reservoir, Lake or Pond
- Wetland
- Major Watershed Boundary
- Forest
- Major Road

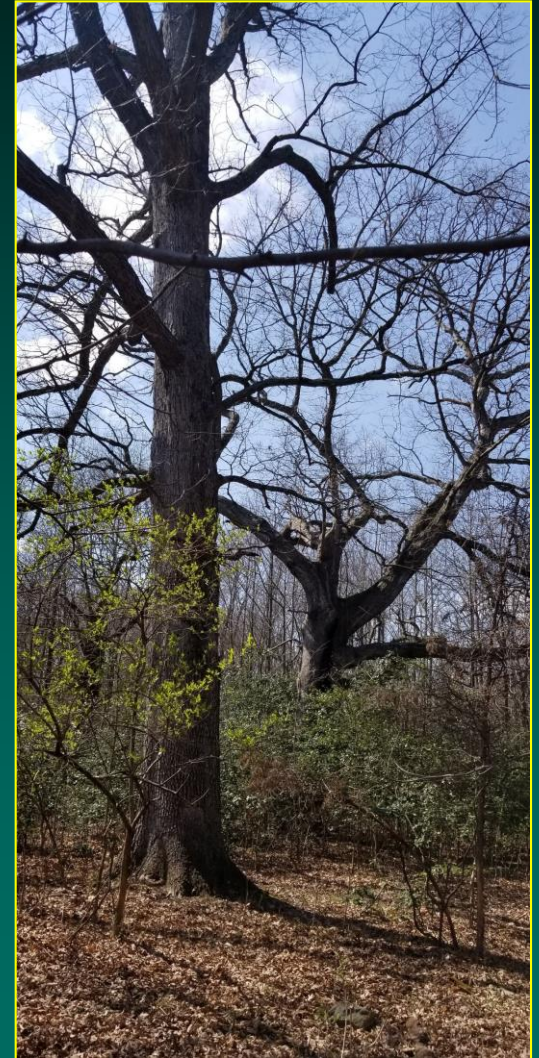
0 1.25 2.5 5 Miles





# *Required Retention Areas*

- ◆ Vegetation listed as rare, threatened or endangered
- ◆ Trees that are part of a historic site or associated with a historic structure
- ◆ State champion trees, trees 75% of the diameter of state champion trees for that species, and trees 30" in diameter or larger



# Welcome To The Maryland Big Tree Program Home Page

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Quercus, rubra

Red Oak

Circumference (inches):	140	Spread (feet):	74.5
Height (feet):	90	Points:	249

Address: Ellicott City

Measuring Crew: Dori Murphy, Joli McCathran, Rod Hendrick, John Bennett

Original Nominator: Owner

Comments: BT-2843. Tree located in front of house 15' from edge of road and 90' from house in grassy area. Tree has a short trunk; we measured the circumference 4' above ground. Tree divides into multiple leaders 6' above ground. NO health issues noted--handsome tree!

GPS Coordinates: Privately owned

Measuring Technique: ENTS

Year Nominated: 2016

Year Last Measured: 2016



# *Priority Planting Areas*

- ◆ *Green Infrastructure Network*
- ◆ 100-year floodplains and stream buffers
- ◆ Wetlands and their buffers
- ◆ Critical habitats and wildlife corridors
- ◆ Steep slopes and highly erodible soils
- ◆ Areas adjacent to existing forest
- ◆ *Areas between small forest and tree stands*
- ◆ *Property line and right-of-way buffers*



# *Reforestation and Afforestation*

## ◆ Preferred Methods

- ❖ Planting with nursery stock
- ❖ Transplanting local plant material
- ❖ Natural regeneration
- ❖ Selective clearing and supplemental planting

## ◆ Preferred Location

- ❖ On-site
- ❖ Mitigation Bank (assess before fee-in-lieu)
- ❖ Off-site

# *Site Design Requirements*

- ◆ Nonresidential – establish FCE for all on-site sensitive areas, with min 75' stream buffer
- ◆ Residential – meet 75% of obligation on-site
  - ❖ Infill subdivisions of 10 lots or less are exempt
- ◆ RC and RR – meet all obligations on-site before importing density
- ◆ Residential – provide 35' setback from rear and side lot lines for any FCE
  - ❖ Setback may be eliminated if larger stock planted

# *Other Changes – Current Policies*

- ◆ Added language to allow retention mitigation banks
- ◆ Off-site retention areas must not be currently protected in perpetuity
- ◆ Security requirement eliminated for retention
- ◆ Eliminated reduction of security after one year
- ◆ Security required for planted mitigation banks
- ◆ Residential fee-in-lieu limited to one acre
- ◆ Fee-in-lieu 20% higher outside Planned Service Area

# *Other Changes*

- ◆ Forest Conservation Agreement term increased from 2 to 3 years
  - ❖ Can be extended if poor survival
- ◆ Process for Variances
  - ❖ Unwarranted hardship standard
  - ❖ Six review criteria
  - ❖ Need approval from DPZ, OCS & DRP
- ◆ Process for Abandonment of FCE
  - ❖ Public notification required



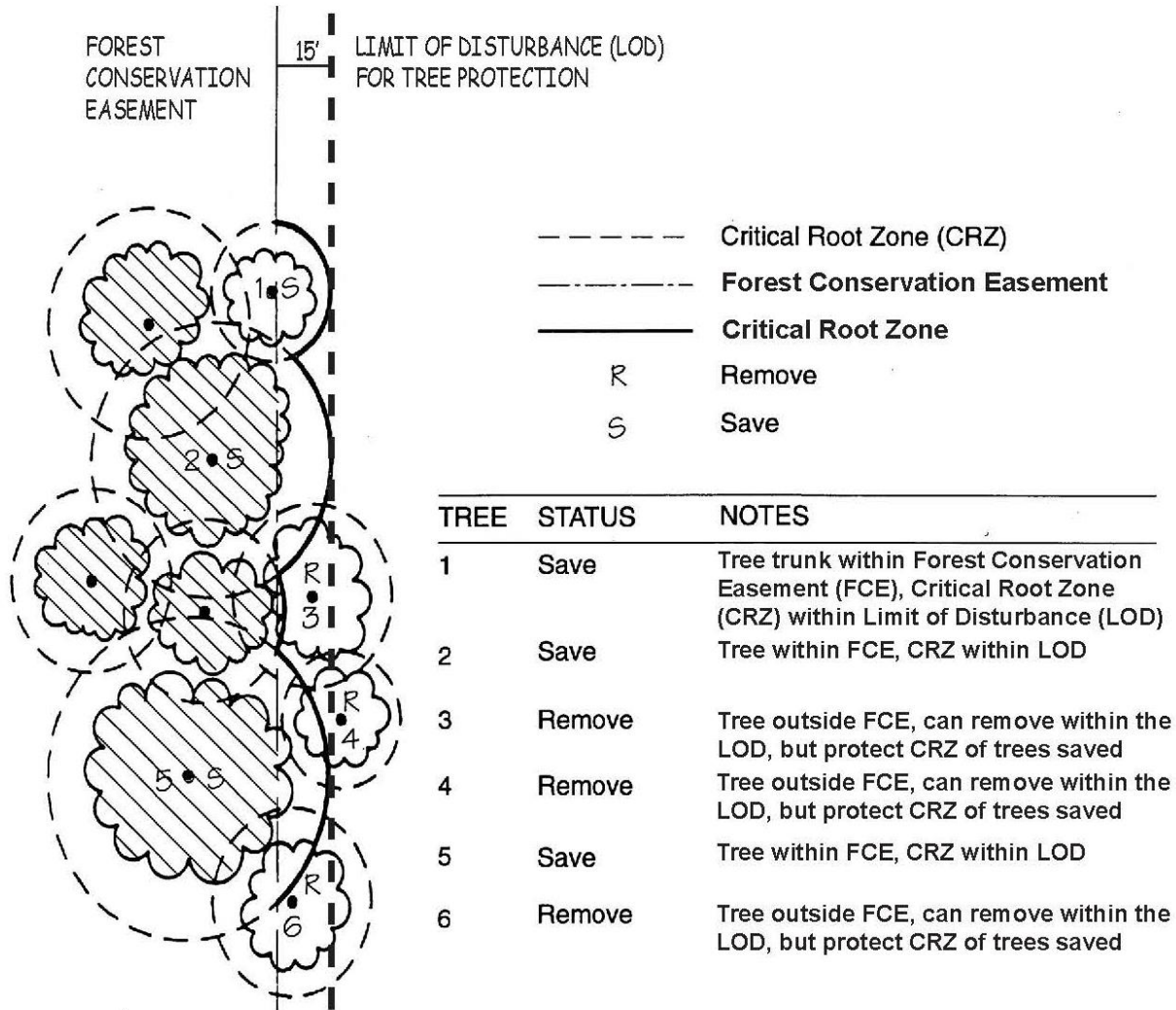
# *Proposed Changes to FC Manual*

- ◆ Reflect
  - ❖ Current County Law
  - ❖ Current plan review procedures
- ◆ Provide guidance for more successful retention and planting projects using DRP protocols
  - ❖ Forest protection during construction
  - ❖ Site preparation, especially invasive species control
  - ❖ Plant selection & installation
  - ❖ Maintenance procedures
- ◆ Emphasize that the Program goal is to maximize forest retention on-site

# *HC Forest Conservation Manual*

- ◆ Introduction
- ◆ *Key Concepts - deleted*
- ◆ Forest Stand Delineation
- ◆ Forest Conservation Plan
- ◆ Implementation Techniques & Practices
- ◆ Program Implementation
- ◆ *15 Technical Appendices – reduced to 8*

# Retention Areas



# *Retention Areas*

- ◆ Retention security reinstated except for banks
- ◆ Retention areas dominated by invasive trees and other woody vegetation
  - ❖ Must remove/treat invasives and replant with native trees
  - ❖ Delineate area in FSD and indicate management in FCP
  - ❖ Credit under selective clearing and supplemental planting



# Planting

- ◆ Added options for planting material size and density
- ◆ Restricted use of seedlings and whips
- ◆ Tree shelters required for all plants



# *Other Changes*

- ◆ New Process for Abandonment or Relocation of FCE
  - ❖ Abandonment – error or encroachment, and requires public notification
  - ❖ Relocation – change in development or site conditions
  - ❖ Standards for easement replacement



*For More Information:*

*[www.howardcountymd.gov](http://www.howardcountymd.gov)*

Department of Planning and Zoning  
Environmental Planning