

# **Forest Conservation Manual – Key Changes**

Draft date: August 22, 2011

Since this list concerns key or significant changes in the Manual, minor edits for clarity are not included in this list.

## **GENERAL**

- The tone of the Manual reflects that this a County Program rather than a State mandated program.
- The original Chapter 2, Key Concepts, is deleted and information from that chapter is incorporated in other appropriate chapters. Material from the chapter introduction and the sections on Applicability, Declaration of Intent, Forest, and Differences From Other Approaches is moved to Chapter 1. Material from other sections, that repeated or added to information in other chapters, is edited and moved to that appropriate chapter.
- A new heading numbering system is added.

## **CHAPTER 1: INTRODUCTION**

### **1.0 Background**

- Protecting retained and planted forest in a Forest Conservation Easement is added as a main intention of the Program.

### **1.1 Purpose of the Manual**

- Procedures for enforcement are listed as a specific component of the Manual.

### **1.3 Applicability**

- Added new language to clarify grandfathering.
- Edited to clarify exemptions, parallel language in the County regulations, and reflect State changes in Declaration of Intent.
- Changes to this section will be reflected in changes to the regulations.
- Exemptions for previously approved plans are eliminated, per the change in State law.
- The exemption for cutting, clearing or grading less than 40,000 square feet of forest is reduced to 20,000 square feet, per the change in State law.
- Added exemptions for mining and other extractive activity, Howard County capital improvement projects, and linear projects, per the regulations. (Note that certain linear projects require a Declaration of Intent.)
- Activities that are conditionally exempt with a Declaration of Intent are listed separately from those that are totally exempt, and include residential development impacting less than 20,000 square feet of forest and certain linear projects.

### **1.5 Declaration of Intent (DOI)**

- The information on timber harvesting is moved to Chapter 5.
- The DOI form (Appendix B) is amended to add a signature block for a notary (reflecting the current form).

## **CHAPTER 2: FOREST STAND DELINEATION**

### **2.1 Purpose and Approach**

- Language is added to clarify that a Forest Stand Delineation (FSD) is needed for all on-site and off-site locations.
- A five-year time limitation is added to the FSD, which is consistent with the State Forest Conservation Act and Manual.

### **2.2 Submission Requirements**

#### **2.2.1 Forest Conservation Application**

- This application form is added as a submission requirement.

#### **2.2.2 Forest Stand Delineation Plan Sheet**

- This section is updated to be compatible with the Land Development Division plan submission requirements checklist.
- Information is added to clarify that a project in or near Sensitive Species Project Review Areas must include a comment letter from DNR in the submittal.
- A new requirement is added to provide information on agricultural best management practices designed to convey water.
- A new exhibit is added to provide an example of an appropriate vicinity map.

#### **2.2.3 Classification of Forest Stands and Other Vegetation**

- Definitions for forest and forest stands are added.
- T represents tree groups that do not meet the definition of forest.
- A new S category is added to represent specimen trees.

#### **2.3.5 Forest Stand Delineation Narrative**

- Added the requirement for narrative on the relationship of on-site and off-site forest, including an estimate of the extent of the described stand.

### **2.3 Combined FSD and FCP Submission**

- Newly added section that allows the FSD and FCP to be combined for minor subdivisions and for grading or building permit applications on a single residential lot or parcel, and describes the plan requirements.

#### **Exhibit 2-D: Forest Stand Delineation Narrative Example**

This example will be redone to better reflect Howard County conditions and the information desired.

## **CHAPTER 3: FOREST CONSERVATION PLAN**

### **3.1 Submission Requirements**

### **3.1.1 Forest Conservation Application and Forest Conservation Plan Checklist**

- Clarifies that the submittal must include the Forest Conservation Application and Forest Conservation Plan Checklist.

### **3.1.2 Forest Conservation Plan**

- Bullets added and other bullets edited as necessary to clarify that the limits of disturbance for clearing and grading, information on agricultural best management practices that convey water, utility and access easements, forest conservation easements, the signature of the qualified professional, and forest conservation worksheets must be included on the Forest Conservation Plan.
- The construction and post-construction management and protection programs are now listed as elements of the Forest Conservation Plan, not as additional required documentation.

## **3.2 Net Tract Area**

- A new section is added to define Net Tract Area generally and for specific development types.
- The exemption for previously developed areas on sites with a previously approved plan is eliminated, per the change in State law.

### **3.2.1 Mixed Use, Multi-Phased Major Subdivision**

- The net tract area may be the net acreage of the phase being processed as a Final Plan.

### **3.2.2 Rural Cluster Subdivision**

- Explains options to exclude the preservation parcel and the floodplain from the net tract area.

### **3.2.3 Minor Subdivision**

- A residue lot or parcel may be excluded from the net tract area.

### **3.2.4 Site Development Plan**

- If the limit of disturbance (LOD) is less than 40,000 square feet, the applicant may choose to define the net tract area as the LOD or as the entire development site.

### **3.2.5 Commercial Use on an Agricultural Property**

- The LOD becomes the net tract area.

### **3.2.6 Linear Project**

- The net tract area must include the area of the road and utility right-of-way, new access roads, storage areas and the LOD.

## **3.3 Calculating Forest Conservation Obligations**

- This section is renamed from Reforestation Calculations.
- Language is added to clarify that the Program emphasis is on retention and meeting the break even point.

### **Figure 3-B: Reforestation and Afforestation Thresholds**

- A new category for Mixed Use and Planned Unit Development is added.

#### **3.3.3 Sample Calculations and Illustrations**

- Exhibits are reorganized to include the forest conservation worksheets, the “beaker” diagram that depicts the threshold concept and a site plan.
- The exhibits include an example of retaining an area of forest less than 10,000 square feet that will have additional planting to create a larger area of forest.
- Five examples are given to cover the following:
  - Clearing to the break even point (no planting required).
  - Clearing below the break even point but above the threshold.
  - Clearing below the threshold.
  - Afforestation required.
  - Afforestation and reforestation required.

#### **Rural Districts**

- This section heading is deleted and relevant information is moved to the Net Tract Area discussion for Rural Cluster Subdivisions.

#### **Coordination with Wetland Mitigation Requirements**

- This section is moved to new section on Coordination with Other Site Issues.

#### **Afforestation Requirements**

- This section heading is deleted and relevant information is incorporated into the section on Calculating Forest Conservation Obligations.

### **3.4 Preferred Mitigation Location**

- This section is moved up and renamed from Off-Site Forest Plantings.
- Location preferences are specified as:
  - On-site
  - Mitigation bank
  - Off-site

#### **3.4.1 Meeting Obligations in Mitigation Banks and Off-site Locations**

- Corrected reference to Forest Conservation Program watersheds and added map of watersheds.

#### **3.4.2 Forest Mitigation Banks**

- New section on forest mitigation banks.

#### **3.4.3 Retention Mitigation Banks and Off-Site Retention**

- Added material about retention mitigation banks and off-site retention.

#### **3.4.4 Planted Mitigation Banks and Off-Site Planting**

- Added material about planted mitigation banks and planting on lands with Agricultural Land Preservation Program easements.

### **3.4.5 Landowner Agreement**

- Added information about landowner agreement requirements for mitigation banks, and off-site planting and retention.

### **3.4.6 Coordination with Density Calculations**

- Added material to explain that the area of a pre-existing planted mitigation bank does not need to be deducted from certain density calculations for rural cluster subdivisions.

## **3.5 Forest Retention Areas**

- Added language to clarify that no credit will be given for forest retention areas not protected by a Forest Conservation Easement, eliminating retention credits that had been granted for lots greater than 60,000 square feet but less than 10 acres.
- Added language to clarify that retention easements may not be placed on septic reserve areas.

### **3.5.1 Priority Forest Retention Areas**

- This is a new sub-heading and explanatory information is added to each priority location, to parallel language in the priority locations for reforestation and afforestation.
- Requirements to protect rare, threatened and endangered species, trees associated with an historic site, and specimen trees are added, per change to State law.
- The 100-year floodplain is listed separately from stream bank buffers.
- Forest corridors for wildlife movement are added as a priority (to reflect current law).
- Steep slopes of 15% with a high erodibility index are added as a priority.
- Forest contiguous to sensitive areas is made a higher priority than forest contiguous to off-site forest. For forest contiguous to off-site forest areas to be a priority, the off-site forest must be protected by a Forest Conservation Easement.
- The wording for property line and right-of-way buffers uses the wording from the regulations, including the reference to scenic roads.
- Smaller forest areas less than 10,000 square feet are deleted as priority retention areas.

### **3.5.2 Forest Retention Area Size**

- The exemptions for planting to create forest that would still be less than 10,000 square feet, and preserving specimen trees and trees associated with historic sites are deleted. Applicants are encouraged to save these areas for aesthetic value.
- Language is added to clarify that when placing a Forest Conservation Easement adjacent to a forested floodplain, the floodplain must also be placed in a Forest Conservation Easement.
- Language is added that smaller forested areas adjacent to off-site forest protected by a Forest Conservation Easement or located on County or State parkland, may be credited as retention if the combined forest area meets the minimum size requirements.
- Small areas of forest less than 10,000 square feet in priority retention areas that are retained and enlarged by planting to 10,000 square feet or greater, will be credited as reforestation, not retention.

## **3.6 Reforestation and Afforestation Areas**

- This section is renamed from Priority Locations for Reforestation and Afforestation, and new subheadings are added.

### **3.6.1 Priority Reforestation and Afforestation Areas**

- Added information about the k value for slopes of 15% or greater.
- Added condition that built slopes of 25% or greater are not a priority for forest conservation planting but should be landscaped.

### **3.7 Coordination with Other Site Issues**

- This is a new section that contains existing information on Coordination with Wetland Mitigation Requirements, and adds new sections on Coordination with BGE and PEPCO, Agricultural Best Management Practices, and Site Design.

#### **3.7.4 Coordination with Site Design**

- This section adds the following new requirements for site design to maximize forest retention and planting on-site before off-site compliance or fee-in-lieu requests will be considered:
  - Nonresidential developments must establish Forest Conservation Easements (FCE) in all sensitive areas. The FCE must be a minimum 75-foot width from the banks of any perennial and intermittent stream.
  - Residential developments must meet a minimum of 75% of their obligation on-site by reducing lot sizes, clustering lots and maximizing open space. Infill subdivisions of ten lots or less are excluded from this requirement.
  - Residential developments in the RC and RR zoning districts must meet all forest conservation obligations on-site before they will be permitted to import development density.
  - A 35-foot rear building restriction line is required from any on- or off-site Forest Conservation Easement.

### **3.8 Preferred Methods for Reforestation and Afforestation**

- The landscaping option is eliminated and variations in stock size are eliminated. The four options are rearranged to prefer planting with nursery stock over other methods, as follows:
  - Planting with nursery
  - Planting with transplanted stock.
  - Natural regeneration.
  - Selective clearing and supplemental planting.
- Information from Appendix F (specifying description, evaluation criteria, design guidance and requirements for approval) is incorporated into the following new subsections. The material is edited into two subheadings, Design Guidance and Requirements for Approval.
  - 3.8.1 Planting with Nursery Stock
  - 3.8.2 Transplant of Local Plant Materials
  - 3.8.3 Natural Regeneration
  - 3.8.4 Selective Clearing and Supplemental Planting

#### **3.8.3 Natural Regeneration**

- Additional requirement is added that at least 75% of the proposed planting area must be located within 50 feet of an adjoining forest or the proposed planting area must be a

forest opening less than one acre, and the adjoining forest must have less than 20% cover of invasive exotic species.

- The definition of natural regeneration is revised to specify 350 seedlings per acre by the end of the two growing season post-construction period or 100 trees per acre with a minimum height of 3 to 4 feet by the end of the seven growing season post-construction period.

### **3.9 Reforestation and Afforestation Planting Plans**

#### **3.9.1 Site Assessment**

- Added information to encourage early management of invasive exotic species, and to conduct soil compaction and soil analysis tests.

#### **3.9.2 Plant Selection**

- Use of species native to Maryland is required. Species grown within a 200- rather than 100-mile radius are acceptable.
- Deleted reference to Soil Survey for selecting the mix of plants and added an option of using the Brush-Lenk map and plant lists in Appendix C.
- The Successional Stage specifications are reversed to specify two-thirds early successional species and one-third mid or late successional species.
- The Place in Canopy specifications increase overstory trees to 75% and decrease understory trees to 25%.

#### **3.9.3 Plant Material Size, Density and Arrangement**

- Shrubs may only be planted when using the selective clearing and supplemental planting option.
- The whips and seedlings options are only allowed for mitigation banks or planting on steep slope areas. New options are added for: 300 trees/acre, two- to three-gallon container grown, 4 to 5 feet tall; and 400 trees/acre, one-gallon container grown, 1 to 4 feet tall.
- Planted material less than 5 feet tall must be sheltered from deer to insure survival, with an exception for seedlings planted at 700 stems per acre.
- Added material on conversion rates for landscape material.

The remaining material in Chapter 3 is reorganized, with new material added and some text from Appendices F – H shifted to this chapter.

### **3.10 Protection Programs**

- This section is renamed from Other Required Documentation and information is added to introduce material in the Construction Period Protection Program and Post-Construction Protection Program subsections.
- The surety for retention easements is eliminated.
- Material from Written Statement is moved to Forest Conservation Plan requirements.
- Definitions for each protection program time period are added.
- The subsections on construction and post-construction protection programs are edited to address only the specifications and sequence of activities that need to be shown on the

Forest Conservation Plan. Material about planting techniques and practices is moved to Chapter 4.

- Material about procedures, including material from Recordation of Restrictions and Easements, and Revision or Abandonment of Recorded Easements, is moved to Chapter 5.

### **3.11 Fee-In-Lieu Requests**

- Added notice that applicants must comply with site design requirements (see Coordination with Site Design) before requests will be considered.
- Fee-in-lieu requests are limited to no more than one acre of forest conservation obligation for residential developments.
- The fee-in-lieu rate will be 20% higher for development proposals outside the Priority Funding Area, per change in State law.

## **CHAPTER 4: IMPLEMENTATION TECHNIQUES AND PRACTICES**

This chapter is rewritten to focus on providing up-to-date information about implementation techniques and practices. Applicable text from old Chapter 4, Appendices G and H, the State Manual, and information from the Department of Recreation and Parks (DRP) is incorporated.

### **4.0 Introduction**

- Information is added to clarify the actions marking the beginning and end of each period, and the related activities for each period.

### **4.1 Construction Period General Practices**

- The subsections on Protecting and Managing Forest Retention Areas, Soil Protection Zone, Best Management Practices During Construction, and Construction Period Planting Procedures are now renamed, expanded sections (Sections 4.2, 4.3 and 4.4).
- New subsections are added for Protection Devices, and Sediment and Erosion Control for Planting.

#### **4.1.4 Construction Period Inspection**

- This section is renamed from Certification of Completion and revised to reflect the change from self-certification to County inspections.
- Information is added to clarify that residents must be notified about the proper use and protection of the FCE areas before approval.

### **4.2 Forest Retention Area Protection Procedures**

#### **4.2.1 Critical Root Zone**

- Critical Root Zone is renamed from Soil Protection Zone.

#### **4.2.2 Effects of Construction on Forests**

- New figure added to list potential construction impacts on forest retention areas with stress reduction techniques and remedies.

#### **4.2.4 Prohibited and Permitted Activities in Forest Retention Areas**

- Activities formerly classified as permitted now may be permitted if they are on the approved Forest Conservation Plan or authorized by DPZ.
- Below ground utilities are no longer permitted.

#### **4.3 Planting Procedures**

- Added information that DRP is available to provide technical advice on site preparation.
- Added new sections on invasive exotic plants and their control.

#### **4.4 Maintenance and Monitoring of Planted Areas**

##### **4.4.3 Controlling Competing Vegetation**

- Mechanical and chemical control measures for invasive species will be permitted.
- Mowing will be allowed for invasive species control only if approved by DPZ.

#### **4.5 Post-Construction Protection Practices**

- The subheading, Minimum Two Growing Season Post-Construction Management Program, is deleted and the information is incorporated into the introductory text for this section. The remaining subsections are expanded and updated.
- Clarified that a longer period than the minimum two growing seasons may be required to achieve required survival rates.

##### **4.5.1 Inspection**

- Information is added to offer technical advice from DRP if severe mortality occurs.

##### **4.5.4 Education of New Occupants**

- Adds bulleted list of material that should be conveyed to new occupants.

##### **4.5.5 Final Inspection and Release of Obligations**

- Updates language to reflect current County inspection process.

## **CHAPTER 5: PROGRAM ADMINISTRATION**

This chapter is renamed from Program Implementation.

### **5.1 Introduction**

- New introduction added explaining chapter content.

### **5.2 Qualified Professionals**

- This section is renamed, and a new subheading, Required Background, is added.
- The section on Responsibilities and Liability of Consultants is made a subsection and the information in this section is updated to reflect current consultant responsibilities.

### **5.3 Organization of the Howard County Program**

- The descriptive paragraph at the end of the section on Interagency Review of Plans is moved here.

## **5.4 Review of Plans**

- This is a new section heading. The subsections Program Administration and Interagency Review of Plans are kept under this section heading and a new subsection, Pre-Submission Clarification, is added. The remaining subsections are made separate sections and moved to later in the chapter.

### **5.4.3 Pre-Submission Clarification**

- Information from Appendix M is moved here and edited to be applicable to all plans.

## **5.5 Major Subdivision and Nonresidential Subdivision Plan Process**

- This is a new section added to describe the major subdivision and nonresidential subdivision plan process.

## **5.6 Minor Subdivision Plan Process**

- This is a new section added to describe the minor subdivision plan process.

## **5.7 Other Plan and Permit Processes**

- This is a new section added to describe the following other plan and permit processes:
  - Site Development Plan
  - Timber Harvesting Plan
  - Howard County Capital Improvement Project
  - Linear Project
  - State Funded Highway Project

## **5.8 Mitigation Bank**

- This is a new section added to describe the mitigation bank creation process.

## **5.9 Inspection and Enforcement**

- New information is added to describe specific agency responsibilities.

## **5.10 Noncompliance and Penalties**

- New information is added to describe County authority for addressing sites that are not in compliance with an approved Forest Conservation Plan.

## **5.11 Forest Conservation Easement**

- New section added to define a Forest Conservation Easement.

## **5.12 Forest Conservation Agreement**

- New section added to define a Forest Conservation Agreement.

## **5.13 Revision or Abandonment of Recorded Easements**

- This section is moved here from old Chapter 4 and updated.

## **5.14 Forest Conservation Fund**

- Language is added that the minimum in-lieu fees established by State law may also be used to maintain existing forests and achieve urban canopy goals, per change in State law.

### **5.15 Accountability to the State**

- Language is added to explain when waiver requests are sent to DNR.

#### **Exhibit 5-A: Program Administration Responsibilities**

#### **Exhibit 5-B: Major Subdivision and Nonresidential Subdivision Plan Process**

#### **Exhibit 5-C: Minor Subdivision Plan Process**

#### **Exhibit 5-D: Site Development Plan Process**

#### **Exhibit 5-E: Timber Harvesting Plan Process**

- These exhibits are updated to reflect current procedures. A new table is added to Exhibit 5-C to address minor subdivisions that don't create Forest Conservation Easements.

#### **Exhibit 5-F: Howard County Capital Improvement Project Process**

#### **Exhibit 5-G: Linear Project Process**

#### **Exhibit 5-H: Mitigation Bank Process**

- These are new exhibits to describe these processes.

## **APPENDICES**

### **APPENDIX A: GLOSSARY**

- Definitions are updated and added.

### **APPENDIX B: DECLARATION OF INTENT**

- New forms reflect notarization requirement.

### **APPENDIX C: WORKSHEETS**

- The Forest Stand Analysis Table is revised to delete the Woodland Suitability Column.
- Now includes a revised Forest Conservation Worksheet (formerly in Appendix E) as well as an explanation for how values in the worksheet are calculated.
- Information on the threshold values for each land use category is added to the worksheet.

### **APPENDIX D: PLANT LISTS**

- Revised the forest association list; added a forest association map; and added lists for native plants and invasive exotic plants.

### **APPENDIX E: SAMPLE DETAILS AND SPECIFICATIONS**

- Figures from old Appendices G and H are moved here, and revised / replaced by graphics in the State Manual.

### **APPENDIX F: FEE-IN-LIEU REQUEST FORM**

- New appendix.

### **APPENDIX G: REFERENCES AND RESOURCES**

- New appendix.

## **APPENDIX H: FOREST INSPECTION GUIDANCE**

- Adds DRP forms for inspection checklist and reforestation inspection/completion report, and adds DRP and DNR forest inspection survival count procedures.

### **Appendix J**

This appendix is deleted and the DRP reforestation inspection/completion certification report is now given in the new Appendix H.

### **Appendix K**

This appendix is deleted. The appropriate State law citation is given in Chapter 5.

### **Appendix L**

This appendix is deleted and relevant information is included in Chapter 3 under the Net Tract Area.

### **Appendix M**

This appendix is deleted and relevant information is moved to appropriate sections of Chapters 3 (FCP and FSD requirements) and 5 (procedural requirements).

### **Appendix N**

This appendix is deleted and relevant information is included in Chapter 3 under the Net Tract Area.

### **Appendix O**

This appendix is deleted. Relevant information on exceptions is moved to Chapter 1, and relevant information on State Funded Highway Projects and All Other County Capital Projects is moved to Chapter 5.

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