Forestry Guidance to Local Governments

Introduction

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Why Publish This Document?

As a result of misconceptions about the practice of forestry persist across Maryland, "forestry" is often equated with "cutting down trees, usually to the detriment of the environment." This guidance document strives to provide an introduction to the many facets of the forestry industry—from forest management and tree plantings to harvest plans, the processing of wood, and the creation of wood products, in order to dispel these misconceptions.

Most forest land in Maryland is owned by private landowners, with 72% owned by farmers, families, small timber investors, and recreational landowners. The forestry community includes landowners, harvesters, sawmill operators, cottage industry furniture makers, and others. State forests, parks, or wildlife management areas account for 25% of forested land, and 3% is owned by the federal government.[1] Some would like to generate an income from their forests without development, and local planning and zoning play a vital role in local forestry. State law recognizes:

> Since it is in the State and public interests to preserve the forest land base and other natural resources, a local government with planning and zoning powers shall support forestry by a reasonable exercise of these powers, including the consideration, development, and interpretation of planning and zoning requirements that beneficially impact the efficient and economic practice of forestry in a manner consistent with the local government's implementation of the [12 state planning] visions listed in §1-201 of the Land Use Article.[2]

One state law frequently believed to apply to forestry in fact does not - Maryland's Forest Conservation Act of 1991 applies only when trees are cut down for development; the act does not apply to forestry.

What is the Intent of this Document?

This document has two main goals.

1. Help local officials to become familiar with the many facets of forestry and the Maryland state laws and regulations that govern it.
2. Provide examples of how local planning and zoning can accommodate the different aspects of forestry, thereby making local officials more familiar with forestry practices in their jurisdictions and as a result, streamlining the permitting process.

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[1] U.S. Forest Service, "Forests of Maryland, 2018," 2019, page 1.

[2] Annotated Code of Maryland, Natural Resources Article, § 5-102.1(e))

This guidance also provides many definitions of forestry-related terms and describes how they may help local officials to better understand the many aspects of forestry.

The Environmental and Economic Benefits of Forestry

1. Forests provide clean water
2. Forests filter and absorb stormwater
3. Forests clean our air
4. Forests provide a home for wildlife
5. Forests improve mental and physical health
6. Forests absorb carbon dioxide, thereby combating climate change
7. Forests help reduce noise pollution
8. Forests provide material for useful and valuable products, from mulch and firewood to paper and furniture

The Business Economic and Community Outreach Network (BEACON) at Salisbury University reported that the direct and indirect economic impact of forestry in Maryland totaled $3,099,488,588 in 2015. Direct economic impact "equals the value of all of the output of the forestry sector *plus* the value of the Maryland-based supply chain needed by Maryland forestry producers to produce their lumber and paper products." Indirect economic impact is a "second-order (or ripple) effect, whereby input providers themselves purchase more inputs."[3] This activity accounted for 6,913 jobs. The Southern Maryland Agricultural Development Corporation (SMADC) and the Grow and Fortify organization report that in 2017, forestry "contributed about **$4.2 billion and supported 18,046 jobs in the Maryland economy**."[4]

Why is the Maryland Department of Planning (Planning) Publishing a Document about Forestry?

The Maryland Department of Natural Resources Forest Service contributed to the forestry guidance document, though Planning was the lead agency as the primary audience is local planning and zoning officials and staff. In addition, Planning is the primary contact for addressing questions and concerns about adapting the guidance to local plans and zoning codes. Planning would also like to thank the Maryland Forests Association, Harford Soil Conservation District, Charles Soil Conservation District, and the Harford and Charles County planning staff for their participation and guidance in the external review of the document.

[3] Dr. Memo Diriker, Dr. Sarah Guy, and Dr. Dustin Chambers, "The Impact of Resource Based Industries on the Maryland Economy," (Business Economic and Community Outreach Network at Salisbury University, January 30, .2018), https://www.marbidco.org/_pdf/2018/Full_Report_All_Maryland_Resource_Based_Industries_Beacon_2018.pdf

[4] https://growandfortify.com/forestry-guide/

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Evolution of Regulations

Maryland has a long history of conserving and enhancing its forest and tree resources. The 1906 Forestry Conservation Act evolved from the vision of Robert and John Garrett, who donated more than 2,000 acres of woodland in 1906 to the state, with the condition that the state would make proper provisions for its care. The 1906 law called for the establishment of a State Board of Forestry, the appointment of a State Forester and the organization of a corps of local fire wardens. This law also included provisions for educating woodlot owners about better management and harvesting methods. One of the first actions by the State Board of Forestry was to appoint Fred W. Besley as state forester, a role he would hold from 1906 to 1942.

Maryland's Forestry Conservancy District Act of 1943 was one of the most progressive forestry laws in the United States. It stated, "It is…the policy of the State to encourage economic management and scientific development of its woodlands to maintain, conserve, and improve soil resources of the State to the end that an adequate source of forest products be preserved for the people…where such interest can be served through cooperative efforts of private forest landowners, with the assistance of the State, it is to be the policy of the State to encourage, assist and guide private ownership in the management and fullest economic development of such privately owned forest lands."

In broad terms, the Act's objectives were to provide economic and scientific management of forests through cooperative efforts with private forest landowners and the regulation of forest practices. The goals were to provide an adequate source of forest products and a continuing supply of raw materials; control soil erosion and floods; protect forests from fire, insects, and disease; protect wildlife; preserve natural beauty; and encourage recreational development.

The Forest Conservancy District Act established sustainable forestry for multiple uses on private woodlands across the state. The Act also established local forestry boards with the purpose of maintaining local control in keeping with Maryland traditions and the diversity of forest types and conditions across the state.

Today, the goals remain the same but many of the powers or duties of the Boards have transitioned to the state. The Boards continue to work with foresters throughout the state, review proposed laws and ordinances, and serve as a sounding board and liaison between private individuals, forest-related industry, and government agencies.

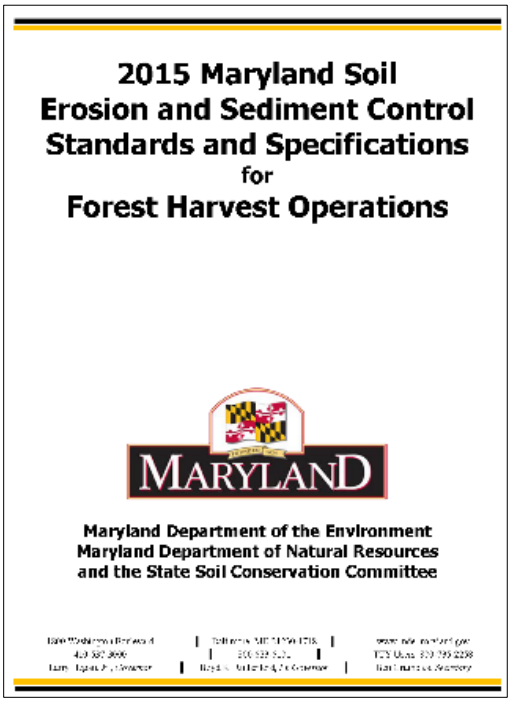
Current regulations that affect the Forestry Industry

MDP Photo Library Environmental: Gunpowder State Park

Today the forestry industry comes under the review of various regulatory programs.

In the Annotated Code of Maryland, Natural Resources Article, Forestry Practices are defined as activities conducted to achieve land management objectives. These activities include:

- Planting
- Prescribed burning
- Thinning
- Pruning
- Harvesting
- Fertilizing and
- Pesticide and herbicide applications



Forest Harvest operations that disturb more than 5,000 square feet or 100 cubic yards of soil must have an **approved erosion and sediment control plan**. Plan requirements may differ based on site conditions and the proposed forest harvest operation. To assist loggers with meeting these requirements, the Maryland Department of the Environment (MDE) and the Maryland Department of Natural Resources (DNR) developed *The Standard Erosion and Sediment Control Plan for Forest Harvest Operations in Maryland (Standard Plan).* The plan covers most basic harvest sites, includes general erosion and sediment control requirements for a harvest operation, and may be obtained at any Soil Conservation District (SCD) Office. For sites that exceed the limits of the Standard Plan, a *Custom Erosion and Sediment Control Plan* (Custom Plan) must be designed specifically for the site. Either the Standard Plan or the Custom Plan must be submitted to the local SCD for review and approval. Additionally, if the harvest site includes removing trees adjacent to a stream or other water body, a Streamside Management Zone (SMZ) Plan may be required. The *2015 Maryland Erosion and Sediment Control Standards and Specifications for Forest Harvest Operations* manual provides guidance on the requirements for plan approval and the various erosion and sediment control practices that may need to be implemented.

Summary of Erosion and Sediment Control Plan Approval Options

Harvesting Specifications	Plans/Approvals
● Road cuts/fills three feet or less (five feet in Garrett, Allegany, Washington, and Frederick Counties) ● Haul road grades do not exceed 15% ● Landings on slopes of 10% or less ● Skid trail slopes do not exceed 20% ● Uncut and undisturbed SMZ ● The site has no stream crossings	Standard Plan Only (Check with SCD as some may require plan to be prepared by a Licensed Professional Forester)
● Harvest involving a nontidal wetland ● Harvest involving a SMZ ● Harvests involving haul roads with slopes between 15% and 20% for a maximum of 200 feet, skid trails with slopes between 20% and 25% for a maximum of 200 feet, or road cuts/fills greater than three or five ● In general, any proposed activity that exceeds the limits set in the Standard Plan	Custom Plan (Must be prepared by a Licensed Professional Forester)
● Harvests involving haul roads with slopes greater than 20%, skid trails with slopes greater than 25%, and landings with slopes greater than 10% ● In general, any proposed activity that exceeds the limits set in the specifications.	Custom Plan with specific Best Management Practice (BMP) design as directed by the SCD (may require certification – see page 10 of the *2015 Maryland Erosion and Sediment Control Standards and Specifications for Forest Harvest Operations*)
● Harvesting involving silvicultural activities within a SMZ	Standard Plan with SMZ Plan or Custom Plan (including SMZ issues)

The **Chesapeake Bay Critical Area** is the land within 1,000 feet of the Chesapeake Bay and its tidal waters or tidal wetlands. Timber harvests within the Chesapeake Bay Critical Area, that are one acre or more in size and occur within a one-year interval, are regulated by the Critical Area COMAR regulatory criteria and the local jurisdiction. For these projects, a **Timber Harvest Plan** must be prepared and approved before any timber can be harvested. A Standard or Custom Erosion and Sediment Control Plan is also required for any harvests that disturb 5,000 square feet or more. For any harvest planned in the Critical Area, contact the local Critical Area representative, usually in the planning department.

In Maryland, certain wetlands with rare, threatened, or endangered species, or unique habitats, receive special attention. MDE is responsible for identifying and regulating these areas that are designated as **Nontidal Wetlands of Special State Concern (NTWSSC).** While forest harvests in nontidal wetlands do not require a nontidal wetland permit, there are other considerations that need to be addressed in the NTWSSC. These protected areas will be delineated by MDE with consultation by the SCD and DNR's Maryland Natural Heritage Program, taking into consideration the harvesting method and schedule proposed by the landowner and the Maryland Licensed Professional Forester (LPF). Professional foresters are licensed by the state, having completed an approved course of study with at least a bachelor of science degree from an accredited forestry school.

Natural Heritage Areas include those with at least one or more threatened or endangered species or wildlife species in need of conservation. This includes plants, either as listed under the federal Endangered Species Act, or by state authorities. Such areas may also include areas with unique physical characteristics or biotic communities. DNR's Natural Heritage division maintains the list of these areas - there are currently 32 of these across Maryland. To the extent that some of these areas have timber on them, it is unlikely that logging would be permitted. Natural Heritage Areas are just one of the sensitive areas in which the DNR might restrict logging. The Sensitive Species Project Review Areas (SSPRA) is a digital map layer maintained by DNR Wildlife and Heritage Service staff that includes the Natural Heritage Areas as well as other areas of concern statewide. Property owners and planners should consult with the DNR if the area planned for timber is within a SSPRA.

Enacted in 1991, the main purpose of the **Forest Conservation Act (FCA)** was to minimize the loss of Maryland's forest resources during land development by making the identification and protection of forests and other sensitive areas an integral part of the site planning process. The FCA requirements relate to land development and construction activities (not forestry activities), and the goal of the act is to ensure that when forested areas are being developed, a portion of existing forest would be set aside to remain as active and healthy forests – with no development allowed in those areas. To be maintained as healthy forests, some management of FCA easements is needed and would be addressed under other regulations.

In accordance with Title 5, Section 608, Annotated Code of Maryland, any person engaged in a forest products business must be a Licensed Forest Product Operator. This license is issued by DNR and includes all sawmills, pulpwood businesses, logging contractors, and firewood dealers. In addition, professional foresters are licensed by the state, having completed an approved course of study with at least a Bachelor of Science degree from an accredited forestry school.

These regulatory practices apply uniformly across the state and are enforced by DNR, MDE, and the USDA Natural Resource and Soil Conservation Service.

It is "the General Assembly's intent that local planning and zoning restrictions that impact silvicultural practices may not be more stringent than restrictions imposed by State law and regulation" (Annotated Code of Maryland, Natural Resources Article, § 5-102.1(d)).

Support of local governments

"(e) Since it is in the State and public interests to preserve the forest land base and other natural resources, a local government with planning and zoning powers shall support forestry by a reasonable exercise of these powers, including the consideration, development, and interpretation of planning and zoning requirements that beneficially impact the efficient and economic practice of forestry in a manner consistent with the local government's implementation of the visions listed in §1-201 of the Land Use Article" (Annotated Code of Maryland, Natural Resources Article, § 5-102.1(e)).

Forestry Management Practices

Planning is a critical part of forest management, including logging. Forestry management practices are generally defined as any activity conducted on or directly pertaining to forest land for the protection, production, and harvesting of timber. Practices can include but are not limited to timber harvesting, thinning of trees, planting, prescribed burning, cutting roads and pathways, and fire prevention.

Prescribed Burning: The Maryland Forest Service recognizes that under certain conditions the use of fire by prescription on specifically designated areas is a desirable procedure in preparing an area for reforestation, for controlling the growth of undesirable species of trees, shrubs and vegetation, wildfire hazard reduction, enhancing habitat, and for other purposes. To conduct a prescribed burning, landowners shall request the advice and service of the Maryland Forest Service.
https://dnr.maryland.gov/forests/Documents/fire/prescribedburningagreement2010.pdf

Application of Pesticides and Herbicides: A Licensed pest control applicator, public agency applicator, or pest control consultant is authorized to perform pest control in forest areas.
COMAR 15.05.01.08

The purpose of Maryland's Forest Conservation and Management Program is to encourage landowners to manage their forest land in return for a reduced and/or frozen property tax assessment. The program is a legal agreement between the landowner and the Department of Natural Resources in which the landowners agree to manage their forest land in accordance with a management plan prepared for the property. To participate in the program, the minimum acreage is five acres and the minimum length of the agreement is 15 years.

Forest Management Plans, Forest Stewardship Plans, Timber Harvest Plans


Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

From a planning perspective, Forest Management and Stewardship plans are like master plans and may guide years of forestry for an area. Timber harvest plans serve as the regulatory approval for a specific cutting operation. Forest management and stewardship plans provide the overall big picture plan for the land – describing how the trees will be allowed to grow and be managed for the health of the forest lands. When the trees have reached their desired size/maturity, a harvest plan is developed describing the harvesting process. To ensure harvesting complies with the State of Maryland regulations for erosion and sediment control, an *Erosion and Sediment Control Plan for Forest Harvest Operations* (commonly referred to as a standard plan) must be submitted to and approved by the local Soil Conservation District. **The following describe the plans and how they are used.**

Forest Management Plans address harvesting, thinning, clearcutting, shelterwood, seed trees, group selection, single tree selection, and prescribed burning. The plans can include:

- Marking and maintaining property lines and corners
- Road, trail, and access control
- Fire protection practices
- Insect and disease inspection, protection, and salvage
- Timetable for review and update of the management plan

A Forest Stewardship plan is a working guide that allows the landowner to maximize the wildlife, timber, recreation, aesthetic value, and other benefits of owning woodland. Following the plan provides a forest that is enjoyable and productive for the owner and future generations.

Timber harvest plans are required for harvest projects on one acre or more of forest in the Critical Area that will be cut within any one-year interval and must be prepared by a Maryland Licensed Forester (LPF). The plan will include:

- Landowner name and address
- Timber harvest location
- Map showing:
    - The location, size, and layout of the harvest
    - Critical area boundary
    - Slopes over 15%
    - Habitat protection areas
- Harvest method
- Regeneration method
- Confirmation of an erosion and sediment control plan
- Wildlife corridor layout
- Allowances made for habitat continuity

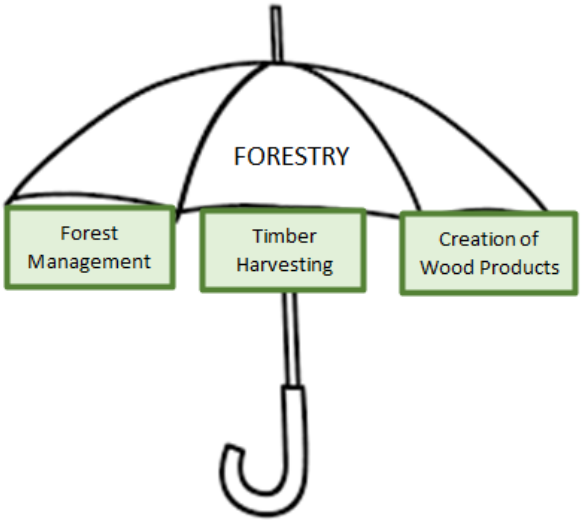
An **Erosion and Sediment Control Plan** is required whenever there will be any earth disturbance activity of 5,000 square feet or more. The plans are coordinated and approved through the local Soil Conservation Districts. Unlike the typical construction project that relies on engineered solutions to capture and retain sediment dislodged by the extensive soil disturbances, forest harvest erosion and sediment control plans place emphasis on protecting the site from initiating soil disturbances. The general sediment control measures included in the plan are the items listed under the preceding section along with but not limited to the following:

- Site entrance
- Roads, trails and landing locations
- Waterway protection
- Stabilization
- May require a buffer management plan

Forestry is more than just cutting down trees!

Most of us think that "forestry" means "cutting down trees to turn them into lumber and other wood products."

It's more helpful, however, to think of "forestry" as an umbrella term that covers three distinct activities, in order of occurrence:



1. Forestry management practices—caring for the forest to keep it healthy and productive including stewardship and conservation.
2. Timber harvesting.
3. The creation of wood products, from logs and mulch to stove pellets to fine furniture.

You may have seen the word "silviculture" used interchangeably with "forestry." For simplicity's sake we will use "forestry."

Let's focus on each one of the three forestry components in turn and make recommendations on how local jurisdictions can define them in statute and allow them in practice.

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Forest Management Practices

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign.

What is a forest? We can adapt a definition from DNR: "a biological community dominated by trees and other woody plants that are capable of producing timber or other wood products with a stocking of at least 100 trees per acre with at least 50% of those trees having a 2-inch or greater diameter at 4.5 feet above the ground."[5]

A healthy forest ensures a superior future tree harvest and also provides environmental services such as clean air and water, biodiversity, and wildlife habitat. Often, forests are available for public recreation. Activities that landowners can take to achieve their land management objectives include the following:

- Planting
- Prescribed burning
- Thinning
- Pruning
- Fertilizing
- Pesticide and herbicide application
- Controlling invasive species and
- Other measures to improve the quality and productivity of the forest.

Local planning and zoning practices that support forest management, allowing the forest to benefit from efficient forestry practices, is consistent with the planning visions listed in §1-201 of the Land Use Article of the Annotated Code of Maryland.


Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Forest management practices can be improved through adherence to a forest management plan, which the Natural Resources Article of Maryland's Annotated Code defines as "a document written by a professional forester[6]… regarding a parcel of land comprising not less than 5 contiguous forested acres that lists activities that enhance or improve forest resources, including soil, water, timber, recreation, and aesthetics over a 15-year period."

Implementing a forest management plan and managing forests for harvesting are one side of the equation. To support these beneficial practices that provide stable and reliable timber supplies, there must also be a supporting market for the raw materials.

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[5] Annotated Code of Maryland, Natural Resources Article, § 5-101. Definitions

[6] "who is licensed under Title 7, Subtitle 3 of the Business Occupations and Professions Article, Annotated Code of Maryland…."

Timber Harvesting

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

It may seem a paradox, but by adding value to trees, timber harvesting encourages their long- term preservation.

"Timber" is a standing tree, felled logs, wood, or entire stands of trees.

"Timber Harvesting," (a.k.a. commercial logging, commercial harvesting, thinning) means "the cutting and removing of tree stems from a site for commercial purposes while leaving the root mass intact."[7]

NOTE: In Maryland, the forestry practice of timber harvesting does NOT include the clearing of forest for the purpose of development. Therefore, timber harvesting does not trigger the Forest Conservation Act and instead relies on other standards for tree planting and forest regeneration.

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

For simplicity's sake, timber harvesting should be allowed in all zoning districts, though in practice some will see little or no timber harvesting.

Timber harvesting requires many steps to limit sediment-laden stormwater, reduce damage to roads from trucks and other equipment, allow regeneration of the forest, ensure the safety of workers, etc. Therefore, a sustainable harvesting plan is necessary. In general, the harvesting plan shall include a listing and description of the selected forest best management practices to be employed during and after the timber harvesting operation.

Soil Erosion and Sediment Control

Forest soil that is disturbed by logging equipment and exposed by tree removal is susceptible to erosion. Rainfall can wash the soil into nearby streams and rivers, damaging them.

The erosion and sediment control plans for timber harvesting shall adhere to the requirements of the *2015 Maryland Soil Erosion and Sediment Control Standards and Specifications for Forest Harvest Operations*, published by MDE, and be approved by the local soil conservation district. Timber harvesting permitted by the county remains subject to any applicable state or federal regulations and permit requirements.

For dealing with logging vehicles and preventing damage to local roads, local jurisdictions can refer to the following chapters of COMAR Title 11, Department of Transportation, Subtitle 04, State Highway Administration:

- 11.04.01 Permits for Oversize and Overweight Vehicles
- 11.04.02 General Conditions for Movement of Oversize and Overweight Vehicles
- 11.04.03 Specific Conditions for Movement of Certain Oversize and Overweight Vehicles

[7] COMAR 08.07.08.01

- 11.04.04 Oversize and Overweight Vehicles—Escort Vehicles, Signing, and Lighting
- 11.04.05 Commercial-Industrial or Subdivision Street Permits (All Entrance Permits other than Residential)
- 11.04.06 Residential Entrance Permits
- 11.21.01 Motor Carrier Safety

Creation of Wood Products

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

This third component of forestry—the conversion of timber into useful wood products—often provides landowners with a monetary incentive to keep forests as forests, resulting in less land used for development.[8] This component is also the most difficult for local jurisdictions to accommodate, because of indecision about where to allow certain uses or even to allow them at all.

In areas zoned for agriculture or resource conservation, for example, an activity to process timber may be seen as industrial and therefore not allowed. However, if we think of forestry as an agricultural use, then some wood processing should be allowed. For example, in agricultural zones hay can be cut, baled, stored, loaded on large trucks, and shipped to retailers, which is similar to cutting timber into logs, milling it into lumber, or grinding bark and small branches into mulch. Both agriculture and forestry start on the landscape with their roots in the soil. While most agricultural crops are harvested annually, timber harvests are on a much longer timeline, and the crop size tends to be larger. As a renewable resource, forests are harvested and milled for products we use every day. The forestry industry includes growers, loggers, foresters, primary and secondary manufacturers, and distribution yards.

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

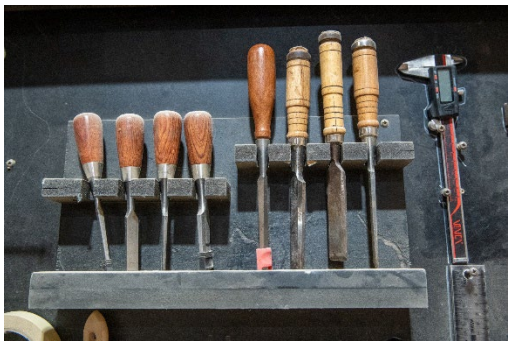


Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Later in this section we will suggest what types of wood processing could be allowed in different generic zoning districts. Forest products from harvested trees include: lumber, logs, pulpwood, firewood, bark, chips, shavings, sawdust biomass, pilings and poles, sawdust, woody biomass, pellets, and mulch.

[8] Of course, there are many non-monetized reasons that landowners retained their woodlands.

Zoning for Timber Processing Operations and the Manufacture of Value-Added Wood Products

From a zoning perspective, agriculture and forestry are both "non" development uses and are exempt from the Forest Conservation Act. Forestry is a robust economic engine in Maryland, and developing a clear approach to including forestry within local agricultural zoning regulations would help the industry continue to grow.

The Maryland Agricultural Land Preservation Program (MALPF), in existence since 1977, is one of the most successful programs of its kind in the country. Its primary purpose is to preserve sufficient agricultural land to maintain a viable local base of food and fiber production for the present and future citizens of Maryland. The program purchases perpetual agricultural conservation easements to prevent farmland from being developed for residential, commercial, or industrial uses. Interestingly, state and federal programs that fund conservation easements to preclude development still generally allow the construction and operation of small-scale forest product manufacturing and drying when the timber supply is regionally produced.

Local jurisdictions should consider which wood processing operations are compatible with agricultural/conservation zones. It makes economic and environmental sense to do basic processing of timber—lumber, logs, mulch, wood bricks, poles, wood pellets, and other wood products —and storage for these items near where the trees are harvested instead of trucking them long distances for processing and sales. This could be accommodated in the zoning table of uses by identifying these uses in appropriate zoning districts.

Zoning and permitting for the siting and operation of primary wood manufacturing such as sawmills, firewood processing yards, or secondary manufacturing plants producing furniture or wood products can be difficult to navigate. Larger projects are generally located on land zoned or re-zoned for industry or manufacturing. However, it is not uncommon for an individual to seek approval for a small sawmill to support a woodworking business or provide boards, posts, or beams for very localized use. Sometimes these are referred to as "portable" sawmills, but they are usually permanently placed and not moved. Often, these are part of a farm operation and on land zoned for agriculture.

Even small mills are essential to the maintenance of forests in Maryland. The conversion of timber into useful wood products often determines how valuable a forest is to its owner and how likely a forest is to be grown and harvested perpetually instead of converted to various developments that changes the land use permanently.[1] In Maryland, before any sawmill or other plant is erected for the manufacture of lumber or other forest products, or when the location of any manufacturing plant is to be changed, the location shall be reported to the DNR prior to the erection of the plant or the change of location. See DNR Article, Section 5-608(a).

Southern Maryland is already home to sawmills in rural areas. Charles County, for example, finds them and other uses to be compatible with rural land and rural resources, as the table below shows. The table also includes some related uses **not** allowed:

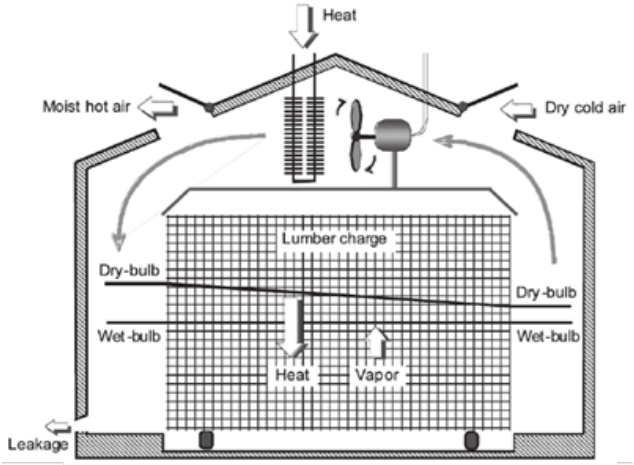
Charles County Zoning County Code Ch. 297 (Zoning Ordinance), Article IV (Permissible Uses), Figure IV-1, Table of Permissible Uses			
Use Description	Agricultural Conservation Zone	Rural Conservation	Watershed Conservation District
1.01.430 Commercial assembly & repair of all equipment normally used in agriculture	Permitted	Permitted	Not Permitted
1.01.470 Processing & selling products raised on-site	Permitted	Permitted	Permitted
1.02.000 Forestry	Permitted	Permitted	Permitted
7.01.230 Sawmills*	Permitted	Permitted	Permitted
7.01.290 Wood/ Stump Grinding	Permitted with conditions	Permitted with Conditions	Not Permitted

*Lumber-drying kilns are associated with sawmills in the county and are also permitted.

For examples of what wood-production facilities look like and if they might be compatible with agricultural/resource zones, see illustrations below.

This portable sawmill is located in rural Charles County (photo upper left); logs can be delivered to the site or picked up. Various milled items are made and also stored on site (remaining three photos).

Lumber-drying kilns come in a variety of shapes and sizes. Basically, a kiln's components look like this:



https://www.researchgate.net/figure/Basic-components-of-kiln-lumber-drying_fig1_229000375

Here is an example of a lumber-drying kiln. There are many types: smaller, larger, or shaped differently based on the drying process.

https://timberlinemag.com/2016/07/pennsylvania-company-on-leading-edge-hardwood-producer-partners-with-sii-dry-kilns-embraces-new-technology/

A stump yard is not a dump but a place where tree stumps and other remains from tree harvesting—including trees unsuitable for lumber—can be turned into mulch with a chip mill like this:

http://www.banditchippers.com/news-and-events/post/25/

In some cases it might be more efficient and straightforward to create a **Rural Industrial and Manufacturing (RIM) District** as a base zone or overlay district. A county in Washington State provides an example of what the zoning provisions might be in a RIM district for forestry-related activities (see Appendix #5)

The Forest Conservation Act and how it applies to forestry

The Maryland Forest Conservation Act (FCA) was enacted by the state legislature in 1991. It provides a set of minimum standards developers must follow when designing a new project affecting forest land. County and municipal governments are responsible for ensuring these standards are met but may choose to implement even more stringent criteria. The FCA aims to ensure a certain amount of forest cover remains on development sites.

Any development project such as a subdivision, project plan, grading permit or sediment control permit on a parcel of land 40,000 square feet or greater must comply with the FCA.

Commercial logging is exempt from FCA requirements. Before logging activities occur, landowners must file a Declaration of Intent with the County or municipal government stating that they will not develop the site after logging for at least five years.

This declaration is a simple test for zoning administrators to determine if FCA applies. Granted, trees are removed when land is cleared for development making it look like a logging project. The logs removed from the site are sometimes sold to a local mill. However, the determinant of the applicability of the FCA is whether the stumps have been pulled from the soil and removed. If so, then that's a clear indication that the land will be converted to non-forest use. However, stumps would generally never be removed in a commercial logging job on land that is to remain a forest. There is no need, and, in fact, sprouts from a stump or roots are a perfectly acceptable way to ensure reforestation. If the stumps remain in Maryland's temperate and moist climate, the "new" forest is inevitable and will replace the harvested trees.

Appendixes

Appendix 1

Definitions

Note: Statutes require a list of definitions of terms used, and the many forestry-related terms—for managing forests, harvesting trees, and making value-added wood products—are useful for reference even if they are not used in a statute. Many of the definitions are from "Terms of the Trade, a handbook for the Forest Products Industry." Edited by William Dean and David S. Evans, Copyright 1978 by Random Length Publications.

Afforestation – The establishment of trees or forest in an area where trees or forests are not present.

Bark – The protective outer layer of a tree. Bark is usually removed from logs and pulpwood at a mill prior to processing and is typically recovered to be sold (usually as mulch or fuel).

Board Foot – The basic unit of measurement for lumber. One board foot is equal to a 1-inch board 12 inches in width and 12 inches in length. Thus, a 10 foot long, 1 inch thick and 12-inch-wide piece would contain 10 board feet as would a 10-foot 2 X 6. When calculating board feet, nominal sizes are assumed.

Chips – Small pieces of wood used to make pulp or wood composites (made either from wood residues in a sawmill or pulpwood operation or from pulpwood specifically cut for this purpose) or fuel (made either from sawmill or logging residues).

Chip Mill – A facility where pulpwood is taken and processed into chips for the purpose of making pulp for paper products or boiler fuel for the generation of steam and/or electricity

Clear Cut – A method of timber harvesting whereby all trees in a given area are cut, generally this method of harvest is used on even aged stands of timber.

Commercial logging or timber harvesting operations is the cutting and removing of tree stems from a site for commercial purposes while leaving the root mass intact.

Conifer – Any of an order of mostly evergreen trees and shrubs, including those with true cones, such as pines and with arillate fruit, such as yews. The wood of conifers is generally classified as "softwood."

Controlled Burning – Also known as **Prescribed Burning**, this is the use of fire to destroy logging debris, reduce buildups of dead and fallen timber that pose wildfire hazards, control tree disease, clear land, and perform other functions such as clearing a buffer strip in the path of a wildfire.

Cooperage – The process of making containers such as barrels, tubs, and kegs using wooden staves and headings and metal hoops. There are two types of cooperages - **Tight,** which is designed to produce containers that will hold liquids, and **Slack,** which covers the production of containers designed to hold other products.

Cord – A unit of measurement equal to a stack of wood 4 X 4 X 8 feet, or 128 cubic feet. Pulpwood is often measured in cords. This unit of measure is used in the sale of firewood.

Cottage Industry – The use of a portion of a residential structure, accessory structure, or a portion of the lot or parcel on which such residence is located, involving the offering of a service, the conduct of a business, or the production of handicrafts on a qualifying parcel. A cottage industry has the potential for greater impacts on nearby properties compared to a home occupation.

Crop Tree – A tree selected to remain as a component of the forest, usually accomplished by removing or killing nearby trees and other vegetation competing for light, nutrients, water, or space.

Custom Plan – A Sediment and Erosion Control Plan prepared by a Licensed Forester that is used in place of a Standard Sediment and Erosion Control Plan when the following conditions or other criteria cannot be met:

1) Road cuts/fills are three feet or less (five feet in Garrett, Allegany, Washington, and Frederick counties)
2) Grades for haul roads do not exceed 15 percent
3) Landings are located on slopes 10 percent or less
4) Grades for skid trails do not exceed 20 percent

Cut over – Land that has previously been logged.

Deciduous – Trees that lose their leaves. Usually, broad leaved and usually classified as hardwoods.

Diameter at Breast Height (DBM) – Standard method of expressing the diameter of the trunk or bole of a standing tree, in the United States, typically measured at 4.5 feet above ground. https://en.wikipedia.org/wiki/Diameter_at_breast_height

Dry Kiln – An oven-like chamber in which lumber is dried to a specific moisture content. Most kilns utilize heat to reduce moisture content, but others use dehumidifiers with or without heat, solar radiation, or microwaves.

Dry Shed – A building used to store lumber and timbers out of the elements. They are utilized for air-drying green lumber and timbers, or to allow air-drying to occur prior to kiln drying, or to temporarily store lumber that has been kiln dried. In most cases, these buildings are three sided to allow for forklift ingress and egress.

Even Aged – A stand of timber that is all about the same age. This is usually the result of an area of forest being cleared by fire, wind, or harvesting, so that new growth starts more or less simultaneously over the same area.

Face Cord – Sometimes used in measuring firewood, a face cord is four feet high by eight feet long but only as deep as the length of the pieces. Thus, a face cord may be 4’ x 8’ x 16” and contain one third the wood volume of a pulpwood or standard cord.

Felling – The act of cutting a standing tree so that it falls to the ground.

Fire Danger – A measure of the likelihood of a forest fire, based on temperature, relative humidity, wind force and direction, and the dryness of the woods.

Firewood – Logs cut into sections (e.g., 12 or 24 inches), then split to be used as a source of heat. (We often refer to firewood as logs, but “log” has a different technical definition, as seen below.)

Firewood processing – The process by which wood (mainly hardwoods) is cut and split into small pieces for use in wood burning stoves and fireplaces.

Firewood Dealer/Seller – Any person or business that supplies or sells firewood. https://www.lawinsider.com/dictionary/firewood-seller

Firewood Processor – A machine designed to cut and split firewood with minimal manual handling of the logs. There are typically four main parts of the machine, each dedicated to a separate function. Processing begins with a log pile – a pile of logs that have been de-limbed and cut to an appropriate length, generally 10–12 feet (3.0–3.7 m). https://en.wikipedia.org/wiki/Firewood_processor

Forest land –

(1) "Forest land" is a biological community dominated by trees and other woody plants that are capable of producing timber or other wood products with a stocking of at least 100 trees per acre with at least 50% of those trees having a 2-inch or greater diameter at 4.5 feet above the ground.
(2) "Forest land" includes forested areas that have been cut but not converted to other land uses.

Forest Management – The practical application of biological, physical, quantitative, managerial, economic, social, and policy principles to the regeneration, management, utilization, and conservation of forests to meet specified goals and objectives while maintaining productivity of the forest. Forest management includes management for aesthetics, fish, recreation, urban values, water, wilderness, wildlife, wood products, and other forest resource values.

Forest Products –

(1) Forest products includes trees or parts of trees that are harvested for compensation.
(2) Forest products includes green lumber, logs, pulpwood, firewood, bark, chips, shavings, and sawdust. (COMAR Title 08. DNR, Subtitle 07. FORESTS AND PARKS, Chapter 08.07.08. Licensed Forest Products Operator. http://mdrules.elaws.us/comar/08.07.08.01)
(3) Items made from harvested timber, including but not limited to lumber, firewood, sawlogs, pulpwood, biomass, other round wood products, and furniture, as well as "special forest products" such as medicinal herbs, fungi, and edible fruits and nuts. https://www.fs.usda.gov/science-technology/forest-products-modernization

Forest products operator means a person who represents to the public that the person is available to engage in the commercial trade of forest products, including the harvesting, transporting, selling, or re-selling of forest products. https://dsd.maryland.gov/regulations/Pages/08.07.08.01.aspx

Forest Stewardship Plan – A working guide that provides professional guidance for the landowner to achieve specific goals and objectives such as wildlife, timber, recreation, aesthetics, and many other benefits of owning woodland.

Forestry or silviculture – The science, art, and practice of creating, managing, using, and conserving forests and associated resources for human benefit and in a sustainable manner to meet desired goals, including goals for:

(1) Clean air and water;
(2) Biodiversity;
(3) Wildlife habitat;
(4) Recreation;
(5) Fiber production; and
(6) Forest product production.

Forestry practices –

(1) "Forestry practices" means silvicultural activities conducted to achieve land management objectives.
(2) "Forestry practices" includes:
    (i) Planting;
    (ii) Prescribed burning;
    (iii) Thinning;
    (iv) Pruning;
    (v) Harvesting;
    (vi) Fertilizing;
    (vii) Pesticide and herbicide application;
    (viii) Transporting;
    (ix) Cultivating;
    (x) Any other activity undertaken to use forest resources or to improve their quality or productivity;
    (xi) Preservation; and
    (xii) Invasive species control.

Hardwood – A general term referring to any of a variety of broad leaved, deciduous trees, and the wood from these trees. The term has nothing to do with the actual hardness of the wood; some hardwoods are softer than certain softwood species

Haul Road – A temporary road used to haul forest products from the location where the products were cut or harvested. https://www.lawinsider.com/dictionary/haul-road

Home Occupation – Any occupation or business conducted entirely within a dwelling or accessory structure, and which is clearly incidental and secondary to the residential use of the premises; provided that not more than one nonresident at any time may work at a home occupation business.

Kiln –

(1) A facility for drying wood in a chamber where air circulation, relative humidity and temperature can be controlled so that the moisture content of wood can be reduced to a target point without having any drying defects.
(2) 2) Kilns can be used to eliminate bugs, fungus, mold, mildew, and other contaminants on firewood.

Landing – A place where logs, pulpwood, or firewood is assembled for transportation to processing facilities.

Licensed Forest Product Operator – A person who has received a license from DNR displaying the person's qualification to practice as a forest products operator.
https://dsd.maryland.gov/regulations/Pages/08.07.08.01.aspx

Licensed Professional Forester – A person who has received a license from the Maryland Department of Labor. The applicant must provide proof of graduation from a four-year curriculum in forestry, or a master's degree in forestry, from a college or university approved by the Maryland State Board of Foresters or accredited by the Society of American Foresters; and two years of experience in forestry that indicates to the Maryland State Board of Foresters that the applicant is competent to practice forestry.

Log – A usually bulky piece or length of a cut or fallen tree
https://www.merriam-webster.com/dictionary/log

Log Deck – The area where equipment is placed to process the harvested trees by topping, sorting by type of wood and size to load onto trucks for transport to the mill.

Log Yard – An area to which loggers can take their product to be sorted for veneer, saw logs, pulpwood, piling/poles, and by species. The logs will be sold to mills for processing into chips, veneer, or lumber, or will be sold for export.

Logging Operation – The process of harvesting timber either through clear cutting, select cut, or thinning using cutters, feller bunchers, and chainsaws.

Lumber – A wood product manufactured from logs by sawing, resawing, and sometimes planing with all four sides cut.

Lumber Yard – Not to be confused with a Log Yard, the lumber yard is an area where dimension lumber and timbers both treated and untreated are stored for mainly retail sales though some can be wholesale facilities.

Merchandising – The process of sorting logs and other parts of felled trees to maximize the value of the felled trees. Merchandising involves the cutting of trees in specific locations that meet specifications for sawlogs, pulpwood, or veneer logs as well as capturing other products having value such as fuel and mulch.

Mulch – A product used as a groundcover to conserve moisture, reduce erosion and limit weed growth that is manufactured from the byproducts of processing trees into products, including bark, sawdust, chips and shavings.

Mulch Yard – A facility that processes wood waste such as roots, limbs, bark, and pulpwood into mulch for both bulk and package wholesale and retail sales for landscaping.

Old Growth – Timber from a stand that has not been logged; virgin timber. Also, the lumber from such timber.

Over Maturity – The point at which timber has begun to lessen in commercial value because of size, age, decay, and other factors. Many of the trees in a **Virgin** or **Old Growth** stand are overmature and are, in fact dying of "old age."

Over Story – The older and taller trees that form a canopy in a forest of mixed species or age groups. One of the objectives of **Selective Logging** is to release the smaller trees below by breaking up or removing the over story of mature, slow growing trees.

Paper Mill – A paper mill is a factory devoted to making paper from vegetable fibers such as wood pulp, old rags, and other ingredients.

Phyto Sanitation Facility – A facility where logs and other wood products are taken to be treated through either a heat or chemical process for the purposes of being exported.

Pine Straw – Fallen pine needles, often used for mulch.
https://www.wordnik.com/words/pine%20straw

Planing Mill – A planing mill is a facility that takes cut and seasoned boards from a sawmill and turns them into finished dimensional lumber. Machines used in the mill include the planer, the molding machines, and varieties of saws.

Plywood – A flat panel made up of a number of thin sheets or veneers of wood in which the grain direction of each ply, or layer, usually is at right angles to the ones adjacent to it. The veneer sheets are united under pressure by a bonding agent.

Prescribed Burn –The controlled application of fire by a team of fire experts under specified weather conditions to restore health to ecosystems that depend on fire and to remove excess fuel loading to prevent major damage by wildfires.

Primary Industry (manufacturing) –The various businesses involved in processing standing trees into products. Many of these products are later consumed by the Secondary Industry as raw material for processing into finished goods. Examples are numerous, but commonly include veneer, lumber, timbers, pulp, poles, pilings, sawlogs, pulpwood, firewood, fuelwood, pellets, bark, mulch, chips, shavings, and sawdust.

Portable Sawmill – Unlike a fixed (mounted in place) unit, this type of mill is usually mounted on a trailer to facilitate moving from one location to another if needed.

Power Unit – A motor that is either electric or internal combustion used to power processing equipment, such as the saw, chipper, planer, and other units.

Pulpwood – Wood used to produce pulp used in the manufacture of paper products; pulpwood is usually wood that is too small, or of inferior quality to sawlogs, or consisting of species not sought by local buyers of sawlogs for use in the manufacture of lumber or veneer.

Pure Stand – A tract of timber consisting primarily of trees of a single species.

Reforestation – The reestablishment of forest cover following harvesting either naturally (by natural seeding, coppice, or root suckers) or artificially (by direct seeding or planting). Reforestation usually maintains the same forest type and is done promptly after the previous forest was harvested.

Regeneration – Re-establishment of a forest stand following the removal of the previous stand by felling or as a result of natural causes. Re-establishment can be achieved by natural means, by natural seeding or vegetative regeneration; by the planting of seeds and seedlings; or a combination of both. (Based on https://foresteurope.org/regeneration/.)

Residue – The wood or bark that is left after harvesting or a manufacturing process (slabs, edgings, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, pulp screenings, and logging slash). Residues may be further distinguished as logging residues or mill residues.

Residual Stand – A stand of trees remaining in the forest following timber harvesting and related activities. https://www.lawinsider.com/dictionary/residual-stand

Running Foot – A linear foot; a measurement of the actual length of a piece of lumber, without regard to the thickness or width of the piece. These are often used for measuring posts, poles, or piling.

Sawdust – A byproduct of wood produced by the sawing of trees into logs and logs into lumber.

Sawlog – A log that meets minimum regional standards of diameter, length, and defect, intended for sawing into lumber or timbers or both.

Sawmill – A sawmill or lumber mill is a facility where logs are cut into lumber. Modern sawmills use a motorized saw to cut logs lengthwise to make long pieces, and crosswise to length depending on standard or custom sizes. The mill can be either a circular saw or a bandsaw. A sawmill can also be a configuration of various equipment used to process logs into lumber including but not limited to chop saws, debarkers, headrigs, board edgers, gang edgers, resaws, scragg mills chippers, blowers, trim saws, sorters, stackers, and planers.

Scale House – A building that houses the components of the scale platform that records and displays weights and prints the tickets for the mill and logger.

Secondary Industry (manufacturing) – The various businesses involved in the further processing of products produced by the Primary Industry into finished goods. These finished goods number in the thousands, but common examples include: paper, paperboard, and cardboard; boxes, crates, and pallets; furniture and furniture parts; fencing; siding, paneling, trimwork, and flooring; trusses and pre-made building components; railroad ties; preservative treated lumber, pilings, and poles; musical instruments; coffins; and a wide variety of chemicals and other derivatives used in manufacturing products such as pharmaceuticals, cellulose, cosmetics, food additives, explosives, and many others.

Sediment and Erosion Control Plan – A document detailing specific measures to be taken to control sediment and erosion before, during and after a timber harvest operation.

Select Cut – A method of timber harvesting where only the selected trees are cut, and the remaining trees are allowed to mature.

Shavings Mill – A facility that processes pulpwood into shavings instead of wood whips. The shavings are used for animal bedding and poultry litter.

Shelterwood Logging – A method of harvesting timber so that selected trees remain scattered throughout the tract to provide seed for regeneration and shelter for seedlings.

Silviculture – The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet diverse needs and values of landowners and society on a sustainable basis.

Skid Trail – Also known as skid roads, are temporary roads or trails used by logging equipment to remove logs from a timber stand. The equipment travels on the skid trails bringing the cut trees from where they were cut down to the landing. https://extension.unh.edu/blog/2019/07/what-are-skid-trails

Slash – Woody debris left in the woods after logging, including logs, chunks, bark, branches, uprooted stumps, and broken or uprooted trees or shrubs.

Slash Burning – The process of disposal of logging debris by controlled burning. The practice has become controversial in recent years because of the pollution problems associated with such burning. Land management agencies generally favor burning as a means of preparing the ground for reproduction and because it reduces future fire hazard.

Softwood – A general term referring to any of a variety of trees having narrow, needle-like or scale-like leaves, generally coniferous, and the wood from such trees. The term has nothing to do with the actual softness of the wood; some softwoods are harder than certain hardwood species.

Species – A category of biological classification; a class of individuals having common attributes and designated by a common name. “Species” is always properly used with the final “s” when referring to trees or other biological classifications; “specie” refers only to money in coin.

Stave Mill – A mill this produces narrow strips used in the construction of barrels or tubs.

Stump Yard – A site reserved for wood waste to be processed, especially brush, branches, and stumps as well as leaves, grass, and other general yard and garden waste. A stump yard is not a dump.

Thinning – A method of harvest whereby a densely populated stand (usually pine) is thinned by cutting selected trees allowing the remaining trees to have more growing space. This is done by two methods:

- **Pre-Commercial Thinning**—Cutting in immature stands before trees reach their marketable size, usually less than five inches DBH so that remaining trees have more room to grow to marketable size. Trees cut in a pre-commercial thinning have no commercial value.
- **Commercial Thinning**—This is done when the tree canopy has closed and the trees have or are reaching pulpwood class, usually 12 to 15 years of age and a diameter of five inches or greater DBH.

Timber –Also known as standing trees or stumpage. A size classification of lumber that includes pieces that are at least five inches in least dimension. They are also classified as beams, girders, stringers, etc.

Timber Harvest Plan – A document which details planned logging operations and the steps that will be taken to minimize environmental impacts of these operations, regards the needs for regenerating the forest, and designs the layout and timing of the harvest operation to provide for efficient extraction of timber from the site.

Tree Expert –

(1) "Tree expert" means a person who represents to the public that the person is skilled in the science of tree care or removal and who, whether in the business of the person or as the employee of another person and whether under the title of arborist, tree specialist, tree surgeon, tree expert, or otherwise, engages in the business or work of the treatment, care, or removal of trees for compensation by:
    (i) Making diagnoses, prescribing, and supervising the treatment for trees; or
    (ii) Trimming, pruning, thinning, cabling, shaping, removing, or reducing the crown of trees.
(2) "Tree expert" does not include:
    (i) A person engaged in commercial logging or timber harvesting operations;
    (ii) A person engaged in the installation of underground facilities or any associated site construction; or
    (iii) A person who treats, cares for, or removes a tree, as described in paragraph (1) of this subsection, that is 20 feet tall or less.
(3) A person may not engage in the work or business of a tree expert without a license issued under the provisions of this part.

Tree Length – Trees that have had the top and all limbs removed, but not cut into log lengths. They are typically 40 feet in length or longer.

Veneer Logs – Sawlogs that meet quality standards for further processing by peeling or slicing into a given constant thickness for use in the production of sheet goods, such as furniture veneers or plywood.

Witness Tree. – A tree used by surveyors to mark the location of a survey corner. The tree is located near the corner and is inscribed with the survey data.

Wood Bricks – (Biomass bricks) – Dried and condensed sawdust and wood chips, formed into a block shape and used as fuel.

Wood Pellets – A wood fuel product manufactured from compressed sawdust or other wood by-product that is pressed or extruded into pieces of uniform size and shape that are designed to be fed in bulk to a combustion chamber.
https://www.woodpellets.com/blog/2014/08/10/wood-pellet-dictionary-common-terms-defined/

Wood Preservation – Wood preservation is the pressure or thermal impregnation of chemicals into wood to provide effective long-term resistance to attack by fungi, bacteria, insects, and marine borers. The wood preserving industry consists of facilities that treat wood such as lumber, ties, poles, posts, or pilings with a preservative. https://www.epa.gov/stationary-sources-air-pollution/wood-preserving-area-sources-national-emission-standards-hazardous

Wood Treatment Facility – A facility where dry lumber, timbers, piling, and poles are put into pressurized tubes to be injected with either water-based or oil borne preservatives.

Woodyard – A facility where logs are brought to be sorted, graded, merchandised, stored, and distributed.

Appendix 2

Summary of Regulations related to Forestry

Size and Weight of Forestry Vehicles

State Laws and Regulations that Apply and May Apply to Forestry Vehicles

Applicable to all Commercial Motor Vehicles:

COMAR Title 11 Department of Transportation, Subtitle 21. Motor Vehicle Administration – Commercial Motor Vehicles

Size and Weight of Forestry Vehicles; Protection of Roads

All vehicles engaged in forestry and using public roads shall operate in accordance with Annotated Code of **Maryland Transportation Article, Title 24. Vehicle Laws--Size, Weight, and Load; Highway Preservation**; Subtitle 1. Size, Weight, and Load;

All vehicles engaged in forestry and using public roads shall operate in accordance with **COMAR Title 11 Department of Transportation Subtitle 07 Maryland Transportation Authority, Chapter 02** Vehicle Size and Width Restrictions.

The following chapters of **COMAR Title 11 Department of Transportation, Subtitle 04 State Highway Administration apply to vehicles engaged in forestry and using public roads**:

11.04.01 Permits for Oversize and Overweight Vehicles**;**

11.04.02 General Conditions for Movement of Oversize and Overweight Vehicles**;**

11.04.03 Specific Conditions for Movement of Certain Oversize and Overweight Vehicles**;**

11.04.04 Oversize and Overweight Vehicles—Escort Vehicles, Signing, and Lighting**;**

11.04.05 Commercial-Industrial or Subdivision Street Permits (All Entrance Permits other than Residential);

11.04.06 Residential Entrance Permits**; and**

Annotated Code of Maryland

- **Land Use Article**, Title 1, Subtitle 4 or Title 3
- **Natural Resources Article**, Title 5. Forests and Parks, Subtitle 1. In General § 5-102.1. Practice of Forestry
- Business Occupations and Professions Article, Title 7. Foresters, Subtitle 3, Licensing
- **Maryland Transportation Article**, Title 24. Vehicle Laws--Size, Weight, and Load; Highway Preservation; Subtitle 1. Size, Weight, and Load

COMAR

- Title 08. Department of Natural Resources, Subtitle 07. Forests and Parks
    - Chapter 08.07.08. Licensed Forest Products Operator

Appendix 3

Nuisances

Nuisances

Under the Maryland Right to Farm Law, silvicultural activities are considered agricultural operations. The Right to Farm Law states that if the agricultural operation has been active for one year or more, is in compliance with applicable federal, state and local health, environmental, zoning, and permit requirements related to nuisance claim and is not conducted in a negligent manner, then the operation, including any noise, dust, or insects from the operation, may not be deemed to be a private or public nuisance and a private action may not be sustained on the grounds that the operation interferes with the use or enjoyment of other property, whether public or private.

State law does not:

- Prohibit a federal, state, or local government from enforcing health, environmental, zoning or any other applicable law;
- Relieve any agricultural operation from the responsibility of complying with the terms of any applicable federal, state, and local permit required for the operation;
- Relieve any agricultural operator from the responsibility to comply with any federal, state, or local health, environmental and zoning requirement;
- Relieve an agricultural operation from liability for conducting an agricultural operation in a negligent manner; or
- Apply to any agricultural operation that is operating without a fully and demonstrably implemented nutrient management plan for nitrogen and phosphorus if otherwise required by law.

Effective October 1, 2006 – the law was amended to include subsection (e):

- The subsection does not apply to an action brought by a government agency.
- If a local agency is authorized to hear a nuisance complaint against an agricultural operation, a person may not bring a nuisance action against an agricultural operation in any court until:
    - The person has filed a complaint with the local agency; and
    - The local agency has made a decision or recommendation on the complaint.
- If there is no local agency authorized to hear a nuisance complaint against an agricultural operation, a person may not bring a nuisance action against an agricultural operation in any court until:
    - The person had referred a complaint to the state agricultural mediation program in the Department of Agriculture under Title 1, Subtitle 1A of the Agricultural Article; and
    - The department certifies that mediation has concluded.

There is some inherent noise, dust, and other potential issues associated with normal forestry production activities that may be considered a nuisance by others in the community. To minimize conflicts a jurisdiction may want to consider adopting their own local right to farm ordinance (if not already in place). Some key elements to consider include:

- A good neighbor policy is generally a statement that pertains to those normal activities associated with agricultural or forestry production that are performed during various times of the year. Statements will often provide that such daily activities shall be performed in a manner that will have minimal impact on the environment as well as human health.
- Key definitions for agricultural land, agricultural operations, forestry operations, and generally accepted agricultural and forestry practices.
- Limitation of actions set forth the circumstances wherein the agricultural or forestry operation is protected from nuisance complaints.
- Resolution of disputes and procedure details that are in place to file a complaint with the appropriate agency. This section also often provides the processes and procedures used to investigate and resolve a complaint.
- An Agricultural Reconciliation Board is a five-or seven-member committee of appropriate members of the community who mediate and sometimes arbitrate disputes between parties resulting from perceived or real nuisance complaints. Authority granted to the committee varies from county to county, but the overall goal of the committee is to resolve the dispute before it reaches the courts.
- A No Standing Clause is a provision that states the plaintiff would have no standing in court if he/she did not seek and/or obtain a decision on the dispute from the county's Agricultural Resolution Board or from the state agricultural mediation program.
- A Bad Faith Clause states that the plaintiff can be found liable for any/all expenses incurred by the defendant if the Agricultural Resolution Board finds that he/she brought the case in bad faith or without substantive justification.
- Method of Notice refers to the method in which the law is communicated to both new arrivals and those already living in an agricultural area. The most common methods are a notice sent out with the yearly property tax bill and a Transfer Disclosure Statement signed when a property is purchased.

Additional considerations for a local jurisdiction could include:

Pollution control and nuisance abatement. Each industrial and/or manufacturing activity is required to continuously employ the best pollution control and nuisance abatement technology when reasonable and practicably available; provided, that where federal, state, or regional laws or regulations provide for the level of technology to be employed, the appropriate standards shall apply.

Heat, light, and glare - All operations and facilities producing heat, light or glare, including exterior lighting, shall be so constructed, screened or used as to not unreasonably infringe upon the use and enjoyment of property beyond the boundaries of the property.

Ground vibrations - No ground vibration other than that caused by highway vehicles, trains or construction activity shall be permitted which is discernible, without instruments, at or beyond the property line for the use concerned.

Odor, dust, dirt, and smoke - No odor, dust, dirt, or smoke shall be emitted that is detectable at or beyond the property line, for the use concerned, in such a concentration or of such duration as to threaten health or safety.

Noise - No use in this district shall exceed the maximum environmental noise level established by local code.

(a) All equipment involved in the harvesting and processing of Maryland's forest resources, including but not limited to vehicles, saws, log-splitting equipment, sawmills, chipper mills, vehicles, furniture-making equipment, etc., shall operate in accordance with COMAR Title 26 Department Of The Environment, Subtitle 02 Occupational, Industrial, And Residential Hazards, Chapter 03**.**

(b) Within residential zoning districts, forestry operations shall not occur before dawn or after dusk.

Note: noise control enforcement can be difficult for local jurisdictions to enforce: it requires special equipment and a determination of, need to determine who at the local level would be the enforcement agency.

Appendix 4

Allowable Uses

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Allowable Uses within Zoning Districts

Note: Perhaps the largest obstacle to forestry is restrictions in the local zoning code that do not allow for the economic viability of different forestry industry needs. The table below is not intended to be adopted as is but to provide an example of forestry-related uses that could be allowed in various zoning districts. (Local jurisdictions, of course, may observe different standards.) Ideally, forestry practices and harvesting should be allowed in all districts, though expanses of forests may not exist in some zones. The local zoning code is key to ensuring that each of the needed forestry-related processing and manufacturing facilities can survive and thrive economically so that Maryland's forestry industry can be sustained, and the production of value-added products from lumber and other forest resources can successfully occur.

Local Zoning for Forestry and Related Uses

P – Permitted
SE – Special Exception
X – Prohibited

Use	High Density Residential	Moderate Density Residential	Very Low & Low Density Residential	Resource Protection	Municipality	Commercial	Industrial
Forestry Practices	P	P	P	P	P	P	P
Timber Harvest (not Tree Removal for Development)	P	P	P	P	P	P	P
Manufacturing, Processing and/or Sales							
Firewood Processor	X	X	SE	P	SE	P	P
Furniture, Manufacture	X	X	X	SE	SE	SE	P
Furniture, Sale	X	X	X	SE	P	P	P
Log /Splitter	X	X	P	P	SE	SE	P
Lumber Yard or Log Yard	X	X	X	X	SE	P	P
Manufacture wood bricks/ pellets	X	X	X	SE	SE	SE	P
Portable or Temporary Sawmill	X	X	SE	P	SE	SE	P
Sawmill (incl. planing & drying, or wood preservative facilities)	X	X	X	SE	X	SE	P
Mulch, pine straw	X	X	X	SE	X	SE	P
Logging contractors, firewood dealers, land clearing companies,	X	X	X	SE	X	SE	P

tree removal companies, lumber brokers							
Cottage industry – firewood, furniture, etc.	X	SE	P	P	P	P	X
Accessory equipment sheds or other storage buildings,	X	X	SE	P	P	P	P
Packaging of forest products	X	X	X	P	P	P	P
Mulch manufacturers and mulch suppliers	X	X	X	P	P	P	P
Wood treatment facilities	X	X	X	P	P	P	P
Wood waste recycling facilities	X	X	X	P	P	P	P
Manufacture of shipping crates, pallets, chips for fuel and particle board, and pulp for paper	X	X	X	P	P	P	P
Manufacture of shelving, furniture, flooring, molding, shingles	X	X	X	X	P	P	P
Wholesale/retail sale of lumber	X	X	X	SE	P	P	P

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Another option is to create an overlay zoning district, a special zoning district placed on top of existing zoning district(s), that would contain provisions to promote forestry and related uses. A variety of standards and regulations best suited for the local government may be implemented that would identify specific permitted, accessory, and conditional uses and allow uses that promote forestry. Building setbacks, impervious surface, and other requirements can be altered for forestry uses. An overlay zone provides an opportunity for the local government to tailor regulations in certain zones by allowing them to be precise about what they want to regulate. Overlay zones also provide the flexibility to make changes to multiple traditional zoning districts at one time, avoiding the need to redraft the underlying zoning ordinances with precise and consistent language for each district. Wherever overlay zones are implemented, they can be drafted in a manner that will effectively and efficiently promote forestry by removing express barriers to forestry that may be codified in previous zoning ordinances.

Appendix 5

Other Approaches to Forestry Zoning: Rural Industrial and Manufacturing (RIM) District

Other Approaches to Forestry Zoning: Rural Industrial and Manufacturing (RIM) District

Note: To allow the processing of forest products closer to their source, Whatcom County in Washington State created a Rural Industrial and Manufacturing (RIM) District https://www.codepublishing.com/WA/WhatcomCounty/html/WhatcomCounty20/WhatcomCounty2069.html

The information is presented in statute form for the sake of simplicity and coherence and is not intended to be adopted as a statute verbatim. The following provisions provide an example of the value-added processing of forest products that one jurisdiction found to be appropriate for rural land.

This district designation could help close the gap between allowing a portable mill to utilize timber only from the land on which it's located and being able to accept logs from other sources.

Photo credit Edwin Remsberg Photographs as part of the Maryland Forests Association Faces of Forestry campaign

Purpose. The purpose of the Rural Industrial and Manufacturing (RIM) District is to provide for industrial and manufacturing uses that are commonly accepted in the rural area, with preference to those uses which facilitate the production of forest products; and to provide employment opportunities for residents of the rural area. This zoning designation allows related processing facilities, limited direct resource sales and limited support services that are not detrimental to the natural resource base in the long term. The district shall comply with the rural land use policies and criteria set forth in the Comprehensive Plan. This district may be located in either a rural community or rural business area. New development or redevelopment in a RIM District located in a rural community designation is limited to that which is consistent with the… building size, scale, use, or intensity in the area. New development in arural business designation is limited to isolated small-scale businesses.

Permitted Uses

(1) Fabrication of furniture and fixtures.
(2) Fabrication of paper products.
(3) Fabrication, maintenance, repair, service and accessory sales of forestry related items
(4) Log scaling station
(5) Manufacturing wood products and containers
(6) Wood waste recycling
(7) Operation of sawmills, chippers, shake and shingle mills, scaling stations, log dumps, sorting and storage areas, forest industry equipment maintenance and storage yards, and forest industry residue dumps and other uses involved in the harvesting and primary processing of timber, provided:
    (i) The intent of processing is initial reduction in bulk and/or to facilitate transport to secondary processing centers; and
    (ii) All uses within 1,000 feet of a park, recreation area or zone district other than Rural, Agriculture or Industrial shall be temporary and of less than 12 months' duration.

Development Standards. The following standards shall be those required in the Rural Zone or equivalent.

(1) The **minimum lot size** shall be consistent with the area required to meet the building setback, lot coverage, buffer and development standards of the rural, rural community, or rural business area.

(2) **Minimum lot frontage -** For the purpose of dividing property, minimum lot frontage shall be sufficient to provide adequate access and utility development, and meet applicable building setback, buffer, and development standards of the rural, rural community, or rural business area. In no case shall the frontage be less than 30 feet.

(3) Maximum building size

  (i) In a rural or rural community designation, maximum allowable floor area of a building shall not exceed the floor area of the largest building of a use of the same or similar type that existed in that same rural community designation on the date this statute takes effect.

  (ii) In a rural business designation, the maximum allowable floor area per building is 7,000 square feet.

(4) **Building Setbacks -** Building setbacks shall be administered pursuant to the setbacks required in the rural, rural community, and rural business areas, respectively.

(5) **Height limitations -** Height of structures shall conform, where applicable, to the requirements of rural, rural community, or rural business area. Piles of materials, including those stored and/or processed on site, shall not exceed 35 feet.

(6) Lot coverage

  (i) On a lot in a rural or rural community designation, combined floor area of all buildings shall not exceed that of a use of the same or similar type that existed on a lot in that same rural or rural community designation on the date this statute took effect.

  (ii) In a rural business designation, building or structural coverage of a lot shall not exceed 50 percent of the total area.

(7) **Open space -** At least X percent of the site shall be kept free of buildings, structures, stored materials, hard surfacing, parking areas and other impervious surfaces.

(8) Buffer area

  (i) When a parcel situated within the RIM District adjoins an Agriculture, Rural, or Residential Rural District, setbacks of adjoining area shall be increased to X feet. Landscaping of said area shall be landscaped consistent with the requirements of the adjoining area.

  (ii) If any part of said buffer area is separated from or sold to any contiguous or adjacent owner, lessee or user, the parcel so separated or sold shall be used only as a buffer area in accordance with the above requirements

Sign regulations - Sign regulations shall be administered pursuant to the local code.

Facility design

(1) RIM developments should be designed to accommodate and complement additional industrial, manufacture, or commercial development on adjacent RIM or other commercially zoned property. Consistent architectural treatment is encouraged. Each development shall screen roof-mounted mechanical equipment so as not to be visible by surrounding uses or roads.

(2) Design of a proposed use in the RIM Zone District shall be consistent with the Comprehensive Plan rural land use chapter.

Landscaping - Landscaping regulations shall be administered pursuant to the local code.

Off-street parking and loading - Off-street parking and loading provisions shall be administered pursuant to the local code. In addition, loading areas must be located in such a manner that no loading, unloading and/or maneuvering of trucks associated therewith takes place on public rights-of-way.

Drainage - All development activities are subject to the stormwater management provisions of the local code. No project permit shall be issued prior to meeting those requirements.

Driveways - Driveway plans shall be reviewed by the county engineer or State Department of Transportation, as applicable.

Enclosure - All manufacturing or fabrication processes which produce physical off-site impacts of a detrimental nature shall be sufficiently enclosed to mitigate the impact.

Pollution control and nuisance abatement - Each industrial and/or manufacturing activity is required to continuously employ the best pollution control and nuisance abatement technology when reasonable and practicably available; provided, that where federal, state, or regional laws or regulations provide for the level of technology to be employed, the appropriate standards shall apply.

Heat, light and glare - All operations and facilities producing heat, light or glare, including exterior lighting, shall be so constructed, screened or used as to not unreasonably infringe upon the use and enjoyment of property beyond the boundaries of the district.

Ground vibrations - No ground vibration other than that caused by highway vehicles, trains or construction activity shall be permitted which is discernible, without instruments, at or beyond the property line for the use concerned.

Odor, dust, dirt, and smoke - No odor, dust, dirt, or smoke shall be emitted that is detectable at or beyond the property line, for the use concerned, in such a concentration or of such duration as to cause a public nuisance, or threaten health or safety, or to unreasonably infringe upon the use and enjoyment of property beyond the boundaries of the district.

Noise No use in this district shall exceed the maximum environmental noise level established by local code

Appendix 6

Other Approaches to Forestry Zoning – Commercial Forestry District

Other Approaches to Forestry Zoning – Commercial Forestry District

Another alternative to fitting forestry uses into existing zones is the creation of a separate Commercial Forestry District. The following is an example of such a zone using text from Whatcom County, Washington State.

(a) Permitted uses.
  (1) Operation of sawmills, chippers, shake and shingle mills, scaling stations; sorting and storage areas; forest industry equipment maintenance buildings and storage yards, and forest industry residue dumps and other uses involved in the harvesting and primary processing of timber provided:
    (i) The intent of processing is initial reduction in bulk and/or to facilitate transport to secondary processing centers; and
    (ii) All uses within 1,000 feet of a park, recreation area or zone district other than Rural, Agriculture or Industrial shall be temporary and of less than 12 months' duration.
  (2) One one-story detached accessory storage building per lot; provided, that the floor area shall not exceed 200 square feet and shall only be used for personal storage and not for habitation or business; and provided further, that the storage building shall contain no indoor plumbing but may be served with electrical power for lighting.

(b) **Conditional Uses** – The conditional uses listed herein shall be administered pursuant to the applicable provisions of the local zoning code.
  (1) Primary or low intensity, secondary processing facilities of timber not permitted in rural areas, excluding pulp, paper or plywood mills.
  (2) Permanent living quarters for trail crews, fire crews, nursery crews, logging crews, and maintenance crews where the use of the living quarters is directly connected to the operation of forest management activities on the property. All such living quarters must conform with local Development Standards.
  (3) Semi-permanent modular or mobile home living quarters, in conformance with X County Development Standards, for a property watchman, which meets the following conditions:
    (i) Limited to one watchman living quarters for each major forest access road which serves large blocks (640 acres or greater) of forest land zoned Commercial Forestry.
    (ii) All watchman living quarters under this section must be located as close as possible to the paved road and be directly adjacent to the major forest access road.
  (4) Mitigation banks as a form of compensatory mitigation for wetland and habitat conservation area impacts when permitted in accordance with the provisions of _____.

Appendix 7

Minimum Acreage and Maximum Setbacks for Forestry and Related Uses

Minimum Acreage and Maximum Setbacks for Forestry and Related Uses

Forestry and Related Uses Forestry	Minimum Acreage	Minimum Setbacks
Furniture, Manufacture		
Furniture, Sale		
Log Splitter		
Lumber Yard or Log Yard or Log Transfer Station		
Manufacture wood bricks/pellets		
Portable or Temporary Sawmill		
Sawmill		
Manufacture other non-lumber silvicultural / forest product (mulch, pine straw, pulpwood, shingles)		
Firewood operators, processors, and/or dealers		
Pulpwood and logging contractors, land clearing companies, tree removal companies, and lumber brokers		
Cottage industry – firewood, furniture, etc.		
Accessory equipment sheds or other storage buildings		
Packaging of forest products		
Mulch manufacturers and mulch suppliers		
Wood preservative facilities		
Wood waste recycling facilities		
Manufacture of shipping crates, shelving, and furniture, pallets, flooring, molding, chips for fuel and particle board and pulp for paper		
Lumber drying facilities		
Wholesale/retail sale of lumber		
Wood product import facility		

Appendix 8

Other Resources

Maryland Forestry Economic Adjustment Strategy

Maryland Forests Association