

FOREST CONSERVATION ACT AND OTHER FORESTRY PROGRAMS IN MARYLAND



DEPARTMENT OF LEGISLATIVE SERVICES NOVEMBER 2017

Forest Conservation Act and Other Forestry Programs in Maryland

**Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland**

November 2017

Contributing Staff

Writers

Cristen C. Flynn
Kathryn H. Seele
T. Patrick Tracy

Reviewer

Ryane M. Necessary

For further information concerning this document contact:

Library and Information Services
Office of Policy Analysis
Department of Legislative Services
90 State Circle
Annapolis, Maryland 21401

Baltimore Area: 410-946-5400 • Washington Area: 301-970-5400

Other Areas: 1-800-492-7122, Extension 5400

TTY: 410-946-5401 • 301-970-5401

TTY users may also use the Maryland Relay Service
to contact the General Assembly.

Email: libr@mlis.state.md.us

Home Page: <http://mgaleg.maryland.gov>

The Department of Legislative Services does not discriminate on the basis of age, ancestry, color, creed, marital status, national origin, race, religion, gender, gender identity, sexual orientation, or disability in the admission or access to its programs, services, or activities. The Department's Information Officer has been designated to coordinate compliance with the nondiscrimination requirements contained in Section 35.107 of the Department of Justice Regulations. Requests for assistance should be directed to the Information Officer at the telephone numbers shown above.



DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF POLICY ANALYSIS
MARYLAND GENERAL ASSEMBLY

Warren G. Deschenaux
Executive Director

November 15, 2017

The Honorable Thomas V. Mike Miller, Jr., President of the Senate
The Honorable Michael E. Busch, Speaker of the House of Delegates
Members of the Maryland General Assembly

Ladies and Gentlemen:

Due to the ability of forests to capture, filter, and retain water, as well as absorb pollution from the air, forests play an important role in protecting water quality. Other benefits of forests include flood control, wood products, renewable energy, climate moderation, higher property values, aesthetics, and recreational opportunities. Since the 1960s, Maryland has lost more than 450,000 acres of forest and before 2008 was losing up to 8,600 acres of forest each year. Although there has been little change in estimated forestland acres since 2008, *The Baltimore Sun* reported in February 2017 that Maryland had lost more than 14,450 acres of forest to development in the previous eight years.

For over 25 years, the State and local jurisdictions have taken steps to facilitate forest retention and sustainable forest management. With respect to addressing development pressures on the State's forestlands, the General Assembly adopted the Maryland Forest Conservation Act (FCA) in 1991, which establishes minimum forest conservation requirements for land development. The FCA was amended in 2013 to, among other things, facilitate no net loss of forest. In addition to the FCA, the State has implemented other programs and incentives to preserve forest acreage, including tax incentives and programs for ecologically targeted tree plantings.

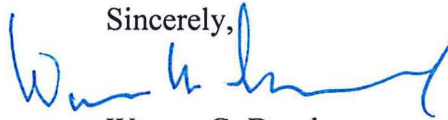
To promote understanding of forest preservation in Maryland and identify additional steps that may warrant action, the Natural Resources, Environment, and Transportation Workgroup within the Office of Policy Analysis prepared this report on the current framework governing forestry programs in the State and policy challenges facing these programs. This report begins with a brief description of the history of the FCA and an overview of its key provisions. Next, the report describes the State's no net loss of forest policy. It continues with a discussion of other forestry programs in the State, and concludes with policy issues for consideration. A timeline of major forestry-related initiatives can be found in **Appendix 1**.

November 15, 2017
Page 2

We trust this report will prove useful to the General Assembly in better understanding forest conservation in Maryland and options to help improve the forest conservation programs. The report was researched and written by T. Patrick Tracy, Kathryn M. Selle, Cristen C. Flynn, and Ryane M. Necessary. Kimberly J. Landry prepared the manuscript.

If you would like additional information regarding this report, please contact Ryane M. Necessary at (410) 946-5350.

Sincerely,



Warren G. Deschenaux
Executive Director

WGD/RMN/kjl

Contents

Transmittal Letter	iii
Introduction	1
Maryland’s Forest Conservation Act	2
Historical Background	2
In General.....	2
Exemptions	3
Forest Stand Delineations	4
Forest Conservation Plans.....	4
Priority for Protected Areas	5
Priority of Conservation Methods.....	6
Afforestation and Reforestation Requirements.....	6
Priority and Methods for Planting.....	10
State and Local Forest Conservation Funds.....	11
Variances.....	12
Forest Mitigation Banks.....	12
FCA Annual Report	13
No Net Loss of Forest Policy	13
Other Forestry Programs	14
Reforestation Fund.....	15
Forest Conservation and Management Program.....	15
Reforestation, Afforestation, and Timber Stand Improvements	15
Woodland Incentives Program.....	16
Wildlands	16
Conservation Reserve Enhancement Program.....	17
Watershed Implementation Plans	17
Policy Considerations	18
Appendix 1 – History of Major Forestry Initiatives	21

Forest Conservation Act and Other Forestry Programs in Maryland

Introduction

Forests, streams, valleys, wetlands, parks, scenic, historic, and recreation areas of the State are basic assets. Their proper use, development, and preservation are necessary to protect and promote the health, safety, economy, and general welfare of the people of the State. Due to their ability to capture, filter, and retain water, as well as absorb pollution from the air, forests play an important role in protecting water quality. Other benefits of forests include flood control, wood products, renewable energy, climate moderation, higher property values, aesthetics, and recreational opportunities.

In March 2017, the Chesapeake Conservancy released land cover information, based on 2013 data that estimates that there are approximately 3.17 million acres of tree canopy cover in Maryland, of which 2.46 million acres is forestland. Tree canopy covers approximately 51% of the State's land area, while forestland covers approximately 39.6% of the State's land area. Since the 1960s, Maryland has lost more than 450,000 acres of forest and before 2008 was losing up to 8,600 acres of forest each year. Although there has been little change in estimated forestland acres since 2008, *The Baltimore Sun* reported in February 2017 that Maryland had lost more than 14,450 acres of forest from development in the previous eight years. Forests, like other open space areas, are under intense development-related pressures for residential, commercial, and industrial conversion due to the demands of a growing population. In addition, forests are susceptible to environmental degradation caused by forest fires, invasive plants, pests, and diseases.

For over 25 years, the State and local jurisdictions have taken steps to facilitate forest retention and sustainable forest management. With respect to addressing development-related pressures on the State's forestlands, the General Assembly passed the Maryland Forest Conservation Act (FCA) in 1991, which establishes minimum forest conservation requirements for land development. The FCA was amended in 2013 to, among other things, facilitate no net loss of forest. In addition to the FCA, the State has implemented other programs and incentives to preserve and promote forest acreage, including tax incentives and programs for ecologically targeted tree plantings. A timeline of major forestry-related initiatives can be found in **Appendix 1**.

This report begins with a brief description of the history of the FCA and an overview of the key provisions of the FCA. Next, it describes the establishment of the State's no net loss of forest policy. The report continues with a discussion of other forestry programs in the State, and concludes with policy issues for consideration.

Maryland's Forest Conservation Act

Historical Background

Before the enactment of the FCA, the State was experiencing significant and increasing loss in forest acreage. Up until the mid-1960s, Maryland was gaining forest acreage. However, during the 1970s, approximately 5,000 acres of forestland were lost per year. From 1980 to 1985, this rate of loss increased to approximately 10,000 acres per year, and from 1985 to 1990, the rate of loss increased to approximately 14,000 acres per year. Although some of the decline of forestland acreage was attributed to losses due to agricultural activity, mining, and tree disease, the most significant losses were due to development associated with population growth.

In an effort to mitigate forest loss in the State, the General Assembly passed the FCA in 1991. The FCA is administered by the Department of Natural Resources' (DNR) Forest Service but is primarily implemented on the local level, through local forest conservation programs. The intent of the FCA is to minimize the loss of forest due to development and to ensure that priority areas for forest retention and forestation are identified and protected before development. Priority areas include nontidal floodplains, streams and accompanying buffers, steep slopes, and critical habitats.

In General

Under the FCA, local governments with zoning and planning authority must develop and adopt forest conservation programs that meet or are more stringent than the minimum forest conservation requirements and standards established by the FCA. If the local jurisdiction does not adopt a program, DNR must review and approve all forest conservation plans in that jurisdiction. A municipality may assign the obligation of approval authority under the FCA to its home county with the approval of the county and DNR.

A local jurisdiction must implement a local program by ordinance and include provisions for regulated activities; exemptions; review, approval, and appeal processes; incentives; protective legal instruments; enforcement; and penalties. A local program must also make available a technical manual that describes application submission requirements for forest stand delineations, required information for forest conservation plan approval, specific forest conservation criteria, and protection techniques. A local program may allow clustering or other innovative land use techniques and may waive the requirements of the FCA for certain previously developed areas that are covered in impervious surface and located in priority funding areas.

DNR is required to perform a compliance review of each local program at least once every two years. If a local program is found to be deficient, DNR must notify the local jurisdiction and allow the local jurisdiction 90 days to comply with the standards and requirements of the FCA. After this 90-day compliance period, DNR may (1) assume review and approval responsibilities for all forest conservation plans in that jurisdiction until the deficiencies are corrected; (2) on a finding by an auditor of misappropriation of local forest conservation funds, require payment to

the State Conservation Fund; or (3) request that the Attorney General investigate payments and expenditures of funds collected by the local jurisdiction under the FCA.

Exemptions

The FCA applies, subject to enumerated exemptions, to any public or private subdivision plan or application for a grading permit or sediment control permit by any person, including a unit of State or local government, on areas 40,000 square feet (approximately 0.9 acres) or greater. The exceptions are listed below:

- highway construction;
- cutting or clearing in the Chesapeake and Atlantic Coastal Bays Critical Area;
- commercial logging and timber harvesting;
- agricultural activity that does not result in a change in land use;
- clearing or routine maintenance of public utility rights-of-way or land for electric generating stations;
- activity on a single lot or linear project that does not result in the cutting, clearing, or grading of more than 20,000 square feet of forest or of forest subject to a previous forest conservation plan prepared under the FCA;
- mining activity;
- activity required for the construction of a dwelling house for the owner or child of the owner that does not result in the cutting, clearing, or grading of more than 20,000 square feet of forest;
- cutting or clearing related to navigable airspace;
- land in a county that maintains at least 200,000 acres of forest cover (Allegany and Garrett counties);
- a stream restoration project with a binding maintenance agreement; and
- maintenance or retrofitting of a stormwater management structure if within the original limits of disturbance for construction of the structure or any maintenance access easement.

Clearing in the critical area is governed by regulations adopted by the Chesapeake and Atlantic Coastal Bays Critical Area Commission. For a utility, the Public Service Commission must consider minimizing forest loss and any appropriate afforestation (the establishment of forest cover in an area where forests have long or always been absent) or reforestation (the restoration of forest cover in an area where existing forest cover has been recently altered) when reviewing an application for a Certificate of Public Convenience and Necessity. In addition, certain activities related to highway construction are subject to the State's reforestation law, which requires efforts to minimize forest disturbance, replacement of cut or cleared forest on an acre-to-acre basis, and if replacement is not possible, payment into the reforestation fund.

Forest Stand Delineations

An applicant for a subdivision or a grading or sediment control permit that is subject to the FCA must first submit to the approval authority (either a local jurisdiction or the State) a forest stand delineation. A forest stand delineation is an evaluation that identifies and maps existing vegetation and priority areas on a proposed development site. A forest stand delineation is used to determine the most suitable and practical areas on the site for forest conservation. A forest stand delineation must include a topographic map showing intermittent and perennial streams; slopes with a grade exceeding 25%; a map showing the soil types present; forest stand maps showing tree species, sizes, locations, and forest types; and any other requirements of the approval authority.

Other appropriate plans or plats may be substituted for the forest stand delineation if there is no forest on the site, or if no forest is to be cleared and all forest on the site is subjected to a long-term protective agreement. An approval authority must notify an applicant within 30 days of receipt whether a forest stand delineation is correct and complete, subject to a possible 15-day extension for extenuating circumstances.

Forest Conservation Plans

After receiving notice that a forest stand delineation is correct and complete, and at the time of application for a subdivision or a grading or sediment control permit, an applicant must submit to the approval authority a proposed forest conservation plan for the site based on information found in the forest stand delineation. A forest conservation plan must be approved before issuance of the subdivision or a grading or sediment control permit. The approval authority must notify an applicant whether the forest conservation plan is complete within 45 days after receipt and may require further information or provide a 15-day extension for extenuating circumstances.

A forest conservation plan must include:

- a site map;
- a table listing, in square feet, the net tract area and the area of forest conservation required for the site, broken down by on- or off-site conservation areas;

- a clear graphic indication of the forest conservation provided on the site, which shows forest retention and afforestation areas;
- an anticipated construction schedule, including the schedule for conservation measures;
- an afforestation or reforestation plan with a timetable and description of needed site and soil preparation, species, size, and spacing to be used;
- locations and types of protective devices to be used during construction activities to protect trees and areas of forest designated for conservation;
- a showing of the limits of ecological disturbance;
- a showing of any stockpiling areas;
- a binding two-year management agreement that details how the areas designated for afforestation or reforestation will be maintained to ensure protection or satisfactory establishment, including watering and reinforcement planting provisions if survival falls below required standards; and
- any other requirement established in regulations adopted by DNR or imposed by a local jurisdiction.

Priority for Protected Areas

A forest conservation plan must give priority for retention and protection to (1) trees, shrubs, and plants located in sensitive areas, including 100-year floodplains, intermittent and perennial streams and any accompanying buffers, coastal bays and any accompanying buffers, steep slopes, and critical habitats; (2) contiguous forest that connects the largest undeveloped or most vegetated tracts of land within and adjacent to the site; (3) trees, shrubs, or plants on a federal or State list of rare, threatened, or endangered species; (4) historic trees; (5) a national, State, or local Champion Tree; and (6) trees that meet specific size thresholds in relation to the current State Champion Tree of that species. Trees, shrubs, and plants given priority because of their location in sensitive areas or contiguous forest must be left in an undisturbed condition unless the applicant demonstrates to the approval authority that the applicant has made reasonable efforts at protection and retention and that the forest conservation plan cannot reasonably be altered to address these priorities. Trees, shrubs, and plants given priority because of inclusion on a specified list, relationship to a historic site or structure, designation as a Champion Tree, or size must be left in an undisturbed condition unless the applicant demonstrates that the applicant qualifies for a variance under the FCA.

Priority of Conservation Methods

Retention and preservation of existing forest is the first priority for conservation measures used under a forest conservation plan. Preservation may be achieved by protective agreements, including a conservation easement, a deed restriction, or a covenant. If retention and preservation options are exhausted, the next preferred methods of forest conservation are on-site afforestation or reforestation that, to the extent feasible, enhances existing forest cover. Under specific circumstances, an applicant may use off-site afforestation or reforestation in the same watershed or in accordance with an approved master plan. Specifically, off-site planting may be used if the applicant either demonstrates that no reasonable on-site alternative exists or that on-site planting in priority areas has been maximized and the applicant has satisfied the approval authority that the environmental benefits of the off-site planting would exceed those of any on-site planting. An approval authority may allow an alternate order of priorities for a specific project if necessary to achieve the objectives of local land use plans or policies, or to consolidate forest conservation efforts.

Afforestation and Reforestation Requirements

For agricultural and resource areas and medium-density residential areas, a development site having less than 20% of the net tract area in forest cover must be afforested up to 20% of the net tract area. For institutional development areas, high-density residential areas, mixed use and planned unit development areas, and commercial and industrial use areas, a proposed development site that has less than 15% of the net tract area in forest cover must be afforested up to 15% of the net tract area.

For example, assume that a medium-density residential development is to be built on a site with a net tract area of 100 acres that is 15% forested. No forest is to be cleared, and the applicable afforestation threshold is 20%. In this scenario, the developer must afforest 5 acres to reach the 20% afforestation requirement. These afforestation requirements must be accomplished within one year or two growing seasons (often approximately three years) after the completion of the development project.

If the afforestation requirements cannot be reasonably accomplished on- or off-site, a developer must mitigate by contributing money to the applicable forest conservation fund in an amount determined by a statutory formula within 90 days after the completion of the development project.

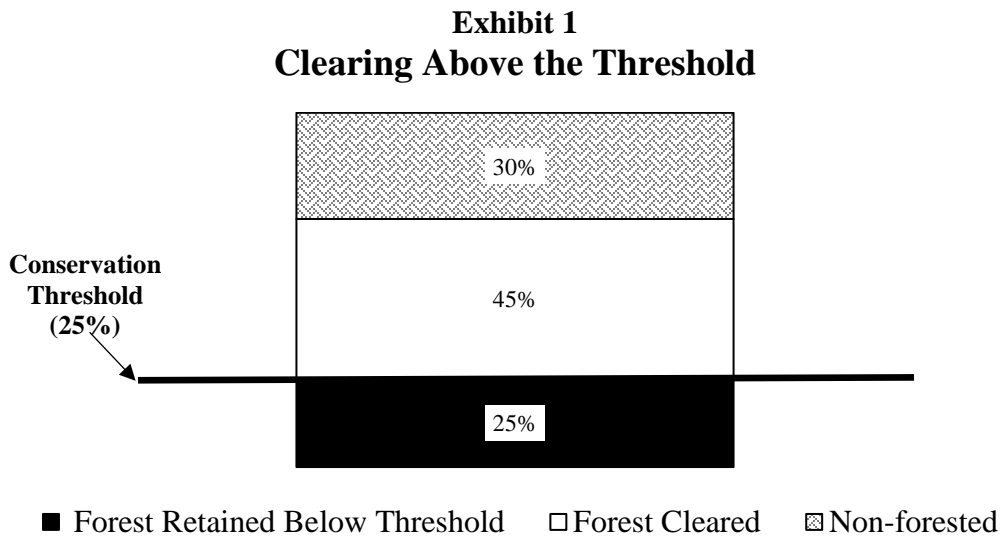
After every reasonable effort to minimize forest clearing is exhausted, the forest conservation plan must provide for reforestation in an amount determined under a statutory formula. The FCA establishes forest conservation thresholds that vary by land use category. Forest conservation thresholds are percentages of the net tract area of a site on which existing forest remains after development, above or below which differing amounts of reforestation must be achieved. For any forest clearing above the threshold, the site must be reforested at a ratio of 0.25 acres for every acre cleared. For acreage of forest cleared below the threshold, the site must

be reforested at a ratio of 2.0 acres for every acre cleared. The conservation thresholds per land use category are as follows:

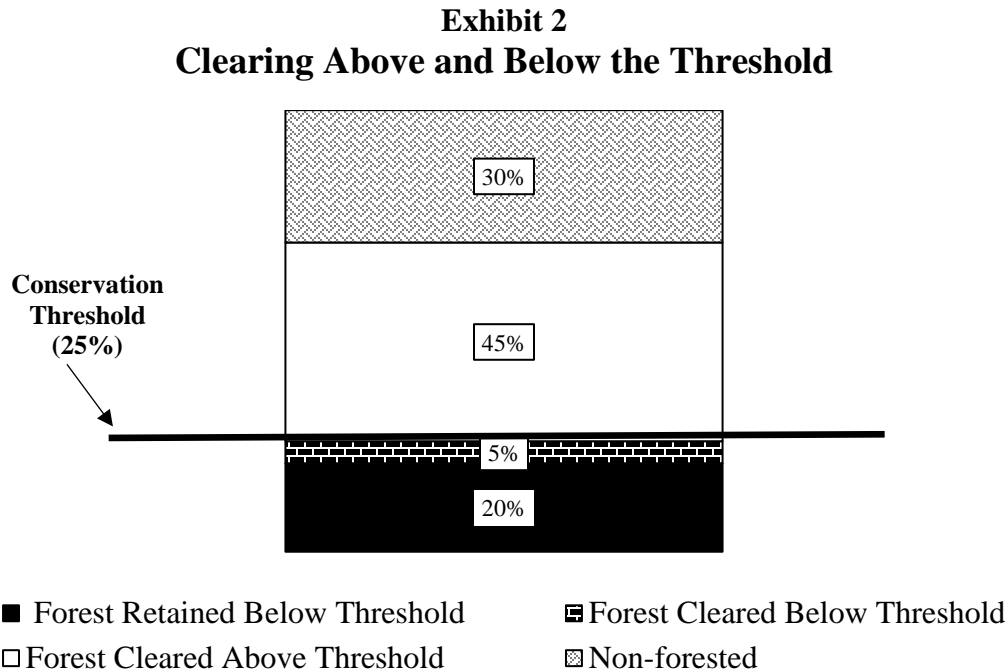
- 50% of the net tract area for agricultural and resource areas;
- 25% of the net tract area for medium-density residential areas;
- 20% of the net tract area for institutional development areas or high-density residential areas; and
- 15% of the net tract area for mixed use development areas or commercial and industrial use areas.

Each acre of forest retained on the net tract area above the threshold is credited against the total number of acres required to be reforested. The reforestation requirements must be accomplished within one year or two growing seasons after completion of the development project. If reforestation cannot be reasonably accomplished on- or off-site, the developer must mitigate by contributing money to the applicable forest conservation fund based on a statutory formula within 90 days after completion of the development project.

For example, assume that a developer of a medium-density residential development on a site with a net tract area of 100.0 acres that is 70% forested will clear 45.0 acres of the forest on the site. On this hypothetical site, as shown in **Exhibit 1**, the 45.0 forested acres cleared are above the threshold, and reforestation would be required on a total of 11.25 acres (45.0 acres x 0.25 for clearing above the 25% threshold).



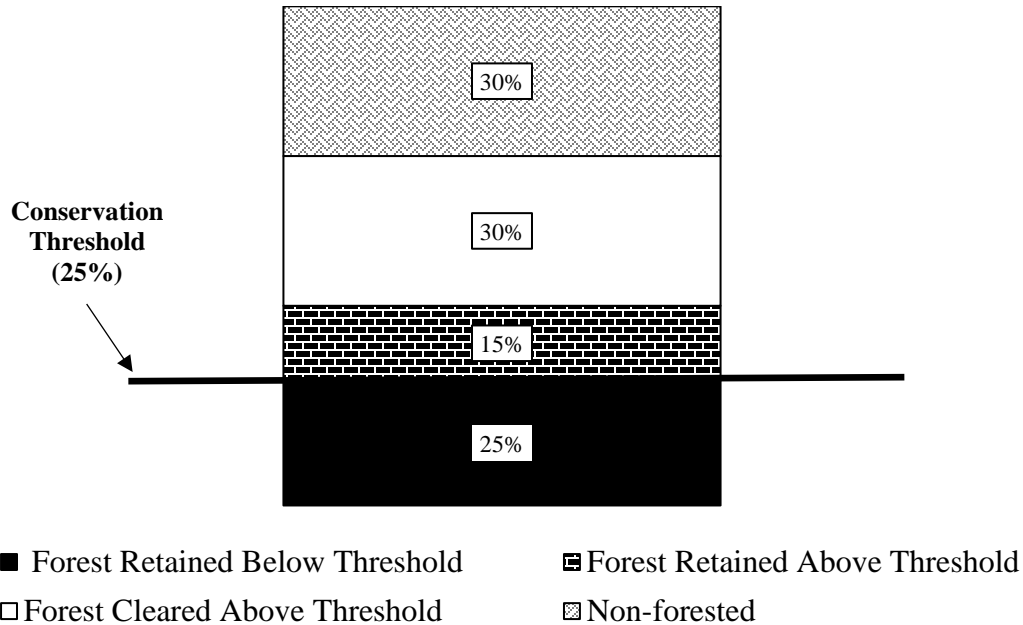
Now assume that the developer will clear 50.0 acres of the forest. As shown in **Exhibit 2**, reforestation would be required on a total of 21.25 acres (45.0 acres x 0.25 for clearing above the 25% threshold plus 5.0 acres x 2 for clearing below the threshold).



Source: Department of Legislative Services

In the same hypothetical situation, now assume that the developer will only clear 30.0 acres. Under this scenario, reforestation would be required on a total of 7.5 acres (30.0 acres x 0.25 for clearing above the 25% threshold); however, the 15.0 acres of forest retained above the threshold would be a reforestation credit that is larger than the reforestation requirement, and thus the developer would not be required to perform any on- or off-site reforestation or mitigation. This situation is shown in **Exhibit 3**.

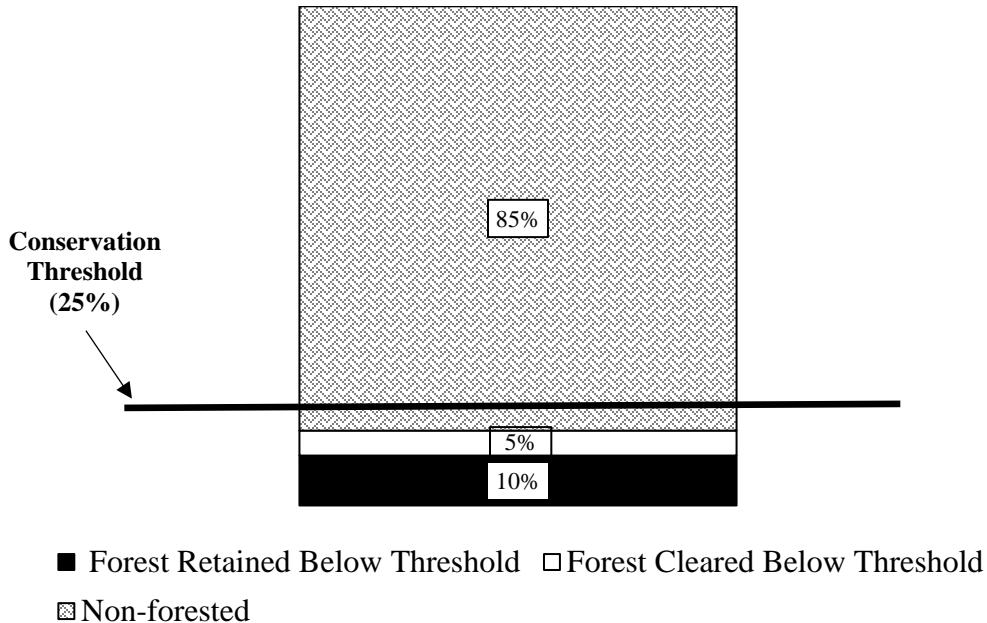
Exhibit 3
Clearing Above the Threshold – Reforestation Credit



Source: Department of Legislative Services

As shown in **Exhibit 4**, there are also circumstances in which the afforestation and reforestation requirements may both apply. For example, assume that a developer of a medium-density residential development on a site with a net tract area of 100 acres that is 15% forested will clear 5 acres of the forest. In this scenario, the developer must afforest 5 acres to reach the 20% afforestation requirement for medium-density residential development. But because the 5 acres cleared are below the 25% conservation threshold, reforestation would be required on a total of 10 acres (5 acres cleared x 2 for clearing below the 25% threshold). Thus, a total of 15 acres would have to be planted (5 for afforestation plus 10 for reforestation).

Exhibit 4
Clearing Below the Threshold – Afforestation and Reforestation Required



Source: Department of Legislative Services

The FCA explicitly authorizes a local jurisdiction to adopt more stringent forest conservation thresholds and afforestation and reforestation requirements as part of a local forest conservation program.

Priority and Methods for Planting

For afforestation or reforestation, a forest conservation plan must give priority to (1) establishing or enhancing forest buffers adjacent to intermittent and perennial streams and coastal bays to widths of at least 50 feet; (2) establishing or increasing existing forested corridors to connect existing forests within or adjacent to the site under specific standards to facilitate wildlife movement; (3) establishing or enhancing forest buffers adjacent to critical habitats; (4) establishing or enhancing forested areas in 100-year floodplains; (5) establishing plantings to stabilize steep slopes; (6) establishing buffers adjacent to areas of differing land use, including a highway or a utility right-of-way; (7) establishing forest areas adjacent to existing forests; and (8) the use of native plant materials.

Standards for meeting afforestation or reforestation requirements are established by the State or local program. A program may require forest creation using transplanted or nursery stock, whip and seedling stock, or natural regeneration when feasible. A program may authorize the use

of street trees in a municipal corporation with a tree management plan, or other areas approved by DNR, in conjunction with an off-site protective easement. When all other options, both on- and off-site, have been exhausted, a forest conservation plan may allow landscaping as a mitigation technique, conducted under an approved landscaping plan that establishes a forest at least 35 feet wide and covering at least 2,500 square feet.

State and Local Forest Conservation Funds

DNR administers the State Forest Conservation Fund to facilitate the required afforestation or reforestation when an applicant cannot reasonably accomplish these requirements on- or off-site. In addition, a local approval authority may establish and administer a local forest conservation fund to apply in that local jurisdiction instead of the State fund. A State or local forest conservation fund consists of payments made by an applicant in lieu of performance of afforestation or reforestation requirements and penalties collected for noncompliance with a forest conservation program, a forest conservation plan, or an associated two-year management agreement.

Payment of fees-in-lieu to the State Forest Conservation Fund are made at rates adjusted for inflation as determined by DNR annually by regulation. The rate for a project outside a priority funding area must be 20% higher than the rate for a project inside a priority funding area. As of August 2017, the rates identified in DNR regulations are 30.5 cents per square foot for a project inside a priority funding area and 36.6 cents per square foot for a project outside a priority funding area. Fee-in-lieu rates for local forest conservation funds must be at least the same as the rates for the State Forest Conservation Fund. An applicant who violates or does not comply with a forest conservation program, a forest conservation plan, or an associated two-year management agreement shall be (1) assessed by the State or local approving authority a penalty of 30 cents per square foot of the area found to be in noncompliance and (2) liable for a civil penalty not exceeding \$1,000 per day for each day that the violation continues.

In fiscal 2017, the State did not collect any fee-in-lieu funds. In fiscal 2016, the latest year for which county and municipal figures are available, counties collected a total of approximately \$2.55 million in fees-in-lieu and spent a total of approximately \$980,000 from county funds. Municipalities collected approximately \$397,000 in fees-in-lieu and spent approximately \$10,000.

Money deposited in a State or local fund as fees-in-lieu may be used only for reforestation and afforestation, including site identification, acquisition, and preparation; maintenance of existing forests; and achieving urban canopy goals. The FCA establishes a preference for off-site afforestation or reforestation financed by a State or local fund to occur in the county *and* watershed in which the underlying development site is located. If this preference cannot be reasonably accomplished, then the next preference is for the planting to occur in either the county or the in-state portion of the watershed in which the project is located. If this preference cannot be reasonably accomplished, then the planting must be accomplished through purchase of credits in, establishment of, or maintenance of a forest mitigation bank.

Money deposited in a State or local fund as a result of violations or noncompliance may be used for implementation of the FCA. DNR must perform the required planting for which a fee-in-lieu is deposited in the State fund within two years or three growing seasons after receipt of the money. Money deposited in the State fund remains in the fund for this period of time, after which any portion that has not been used to meet the planting requirements must be returned to the developer to be used for documented tree planting in the same county or watershed above any amount otherwise required. In practice, this reversion provision is impractical, as money would be remitted to a developer that initially could not perform the plantings. Furthermore, developers are disinclined to take responsibility for the plantings because of the two-year management requirement, the additional contractors needed, and the additional bonding requirements for the project. Therefore, in practice, as a reversion date nears, DNR leverages the money as matching grants to local jurisdictions for urban tree plantings. In light of local jurisdictions' authorization to implement even more stringent criteria and to provide greater flexibility to implement tree planting efforts at the most strategic times, the General Assembly repealed the reversion requirement for local forest conservation funds in 2010.

Variances

In establishing State or local forest conservation programs, the State and local jurisdictions are required to provide for the granting of variances where, owing to special features of a site or other circumstances, implementation of the program would result in unwarranted hardship to an applicant. Variance procedures must be designed in a manner consistent with the spirit and intent of the FCA and must assure that the granting of a variance will not adversely affect water quality.

Forest Mitigation Banks

Under the FCA, DNR has established standards for the creation and use of forest mitigation banks as part of a forest conservation program. Forest mitigation banking is the intentional restoration or creation of a forest, targeted to provide enhanced environmental benefits, for the express purpose of selling credits to others for compliance with afforestation or reforestation requirements for future development. A mitigation bank may be used only for priority areas for afforestation and reforestation or areas identified in a local comprehensive plan. Forest mitigation banks must protect and conserve in perpetuity afforested or reforested land consistent with reasonable management plans, through easements, covenants, or other similar mechanisms that are in place at the time credits are sold. Credits in a mitigation bank may not be sold until a State or local inspection concludes that the planting and maintenance are complete and the legal protections are in effect. Although DNR has yet to establish a forest mitigation bank, numerous local jurisdictions have done so.

FCA Annual Report

DNR must submit an annual statewide report to specified legislative committees on (1) the number, location, and type of projects subject to the FCA; (2) the amount and location of acres cleared, conserved, and planted; (3) the amount of reforestation and afforestation fees and noncompliance penalties collected and expended; (4) the costs of implementing the forest conservation program; (5) the size, location, and protection of any local forest mitigations banks; (6) the number, location, and type of violations and type of enforcement activity conducted; and (7) to the extent practicable, the size and location of all conserved and planted forest areas, submitted in an electronic geographic information system or computer aided design format. The statewide report must be compiled from information submitted to DNR by local jurisdictions.

Exhibit 5 shows the amount of forest acres retained, planted, and cleared (in acres) under the FCA for the previous five fiscal years for which data is available.

Exhibit 5
Forest Retained, Planted, and Cleared under the FCA
Fiscal 2012-2016
(In Acres)

<u>Fiscal Year</u>	<u>Forest Retained</u>	<u>Forest Planted</u>	<u>Forest Cleared</u>
2016	4,503	759	3,364
2015	2,040	318	1,249
2014	2,280	312	1,468
2013	1,792	265	859
2012	4,186	931	2,352

FCA: Maryland Forest Conservation Act

Source: Department of Natural Resources

No Net Loss of Forest Policy

When it was initially enacted, some stakeholders viewed the FCA as a means to achieve a policy that results in no further loss of forestland in the State. This policy goal is commonly referred to as a no net loss of forest policy. However, the FCA did not function as a mechanism for implementing a no net loss of forest policy. A 10-year review of the FCA (1992 through 2002) completed by DNR in 2004 found the FCA had resulted in the retention of 79,174 acres of forestland, planting of 13,611 acres of forestland, and clearing of 42,906 acres of forestland. Thus, during the review period, more forest acreage was cleared than planted under the FCA.

In its January 2007 report, the Maryland Transition Work Group on Environment and Natural Resources recommended that the State adopt a no net loss of forest goal through legislative and executive actions. At the time, Maryland was losing 8,600 acres of forestland each year. The work group noted that the maintenance of forest is as important to restoring the Chesapeake Bay as any investments in sewage treatment or air quality controls. The work group concluded that avoidance and minimization of forest loss should be a priority over reforestation.

The Task Force to Study a No Net Loss of Forest Policy was established by the General Assembly in 2008 to (1) develop a specific plan, including programs and other necessary actions, to achieve and maintain a no net loss of forests and (2) draft legislation for the 2009 session to ensure that there would be a process to achieve a no net loss of forest in the State beginning in 2010. The task force issued a final report in January 2009 that included various recommendations for modifications to the FCA relating to, among other things, limiting exemptions from the FCA's requirements and improving the effectiveness of mitigation of forest loss under the FCA.

Chapter 298 of 2009, among other things, required DNR to cooperate with forestry-related stakeholder groups to (1) determine the meaning of no net loss of forest for the purposes of any State policy and (2) develop proposals for the creation of a policy of no net loss of forest in the State. In 2011, the Sustainable Forestry Council, an advisory body within DNR, issued the *Report on Policies to Achieve No Net Loss of Forests in Maryland* with recommendations for changes to FCA policies, including enhanced protection for large contiguous forested areas, revision of existing exemptions, and improved use of fee-in-lieu funds by local governments. DNR's subsequent January 2012 report in response to Chapter 298 supported the recommendation of the Sustainable Forestry Council that the State implement initiatives that, by 2020, ensure that 40% of all land is covered by forest. Finally, in 2013, the General Assembly established that it is the policy of the State to achieve no net loss of forest, meaning that 40% of all public and private land in Maryland is covered by tree canopy (Chapter 384). The legislation further required DNR to provide local jurisdictions with a statewide forest resource inventory at least every five years to be available for their local comprehensive plan review. In practice, DNR has provided local jurisdictions with tree canopy raw data for the specific jurisdiction upon request. The data is intended for use in the local jurisdiction's Geographic Information System (GIS) database.

Other Forestry Programs

In addition to the FCA, State and local jurisdictions implement other programs and incentives to promote forest planting and retention. The following is a brief description of some of these programs and incentives.

Reforestation Fund

A highway construction activity (including related off-site environmental mitigation) funded with any State money is required to minimize, to a reasonable extent, the cutting or clearing of trees. If a highway construction project requires the cutting or clearing of more than one acre of forest, then the constructing agency must identify an equivalent area of public land to be reforested by DNR. Reforestation must be accomplished on an acre-to-acre basis and must occur within two years or three growing seasons of project completion. To cover the cost of planting, the construction agency also must pay DNR 10 cents per square foot (\$4,356 per acre) of area of required planting. Preference must be given to reforestation in the same county or watershed as the highway construction. If this preference cannot be attained, then the reforestation may occur through the use of forest mitigation bank credits in the county or watershed.

If the construction agency cannot locate appropriate or sufficient land for planting or sufficient forest mitigation bank credits, the agency is then required to contribute 10 cents per square foot of area of required planting into the reforestation fund. DNR uses the fund to (1) finance tree planting; (2) purchase mitigation credits; (3) replace trees that were destroyed by treatment for plant pests; or (4) finance the prevention of and response to forest health emergencies, including fires and other acts of nature. According to DNR, in fiscal 2017, 33.28 acres of existing forestland were impacted by the State Highway Administration (SHA), while 11.14 acres of forest were planted by SHA and another 7.5 acres of forest were planted by DNR.

Forest Conservation and Management Program

An owner of five or more contiguous acres of forestland may enter the Forest Conservation and Management Program. Under the program, a landowner enters into a legal agreement with DNR to manage the covered forestland consistent with the agreement in exchange for a reduced (at low agricultural tax rates) and frozen property tax assessment. An agreement must remain effective for at least 15 years and may be transferred in whole or in part. If a forest landowner violates an agreement, the landowner is subject to back taxes computed from the beginning of the agreement. According to DNR, there are currently approximately 680 properties enrolled in the program covering approximately 27,235 acres of forestland.

Reforestation, Afforestation, and Timber Stand Improvements

An owner or lessee of 3 to 1,000 acres of land may apply to DNR for initial certification that a reforestation, afforestation, or timber stand improvement plan approved by a licensed forester has been implemented for all or a part of the land. An owner or lessee who receives certification may take a subtraction modification from federal adjusted gross income to determine the State adjusted gross income for purposes of determining State income tax liability. DNR may issue final certification to the applicant within 2 years of initial certification if the forestry practices under the plan meet minimum standards established by DNR. If the forestry practices do not meet the minimum standards, DNR may grant the applicant an extension under an amended plan. The

land must remain as forestland for 15 years after final certification, and the plan and practices are subject to decertification for failure to continue to meet DNR standards.

The subtraction modification is twice the cost of reforestation, afforestation, or timber stand improvement activity. Fifty percent of the modification may be used in the year of initial certification, and the remainder may be used in the year of final certification. In addition, in the year of final certification, a program participant may take a subtraction modification equal to twice the cost of any supplemental reforestation and timber stand improvement measures implemented. Any subtraction modification taken under the program is subject to offsets for any federal cost share funds used. Decertification of a plan subjects the applicant to repayment of all subtraction modifications received.

According to DNR, since 1985, 749 landowners have invested \$2.2 million improving 25,826 acres of forestland, reducing taxable incomes by \$1.5 million. But the program has shown decreasing usage in recent years. Only six landowners participated in 2017, spending \$5,467 improving 49 acres of forestland and reducing taxable incomes by \$3,847.

Woodland Incentives Program

The Woodland Incentives Program in DNR is a cost-share program for an owner of 5 to 1,000 acres of private nonindustrial forestland who agrees to develop, manage, and protect the forestland for 15 years. The program may pay up to 65% of the cost of approved forest management activities, not exceeding \$5,000 annually or \$15,000 over a 3-year period. In addition, the total of State and federal cost-share assistance may not exceed 90% of the cost of the forest management activities. An owner may use program funds for practices including reforestation, afforestation, timber stand improvements, and preparation of forest stewardship plans. According to DNR, in fiscal 2017, 176 landowners enrolled 5,190 forest acres into the program and requested \$242,967 in reimbursement. Ninety-one landowners have completed forest management activities on 2,447 acres of forestland at a total cost of \$147,143, resulting in program reimbursement of \$101,633.

Wildlands

Wildlands are limited areas of land or water (much of which is forested or proximate to forests) that have retained their wilderness character, although not necessarily completely natural and undisturbed, or have rare or vanishing plant or animal life or similar features of interest worthy of preservation. The State wildlands preservation system devotes State-owned wildlands to public purposes for recreational, scenic, scientific, educational, conservation, and historic use. Commercial activities, permanent or temporary roads, and the use of motorized equipment, vehicles, boats, or structures are not allowed in wildlands, subject to existing private rights and certain limited exceptions. The system has been expanded many times since its creation, most recently in 2014. There are currently 38 separate designated wildlands in the State, consisting of a total of approximately 66,000 acres.

Conservation Reserve Enhancement Program

The Conservation Reserve Enhancement Program (CREP) is a federal/State partnership that compensates farm owners who agree to take environmentally sensitive farmland out of production for 10 to 15 years and, instead, implement conservation management practices such as planting streamside buffers, establishing wetlands, protecting highly erodible soils, or establishing wildlife habitat. These practices are often implemented through afforestation and other tree plantings. The CREP, a voluntary program, offers the farm owner an initial signing bonus of up to \$250 per acre, annual rental and incentive payments, and cost-share assistance for the implementation of the conservation management practices. Permanent easements are available in some areas. In Maryland, as of November 2017, approximately 52,685 acres of farmland were subject to conservation management practices under the program.

Watershed Implementation Plans

In December 2010, the U.S. Environmental Protection Agency (EPA) established a Chesapeake Bay Total Maximum Daily Load (TMDL), which sets the maximum amount of nutrient and sediment pollution the bay can receive and still attain water quality standards. It also identifies specific pollution reduction requirements; all reduction measures must be in place by 2025, with measures in place to achieve at least 60% of pollution reductions relative to 2009 by 2017 – the timing of the midpoint assessment.

As part of the Chesapeake Bay TMDL, bay jurisdictions must develop watershed implementation plans (WIP) that identify the measures being put in place to reduce pollution and restore the bay. WIPs are submitted to EPA for review and evaluation to (1) identify pollution load reductions to be achieved by various source sectors and in different geographic areas and (2) help to provide “reasonable assurance” that sources of pollution will be cleaned up, which is a basic requirement of all TMDLs. In 2010, each bay jurisdiction submitted a Phase I WIP that details how the jurisdiction plans to achieve its pollution reduction goals under the TMDL. In 2012, the bay jurisdictions submitted Phase II WIPs that establish more detailed strategies to achieve the bay TMDL on a geographically smaller scale. A Phase III WIP, which must be submitted to EPA in 2018, will ensure that all practices are in place by 2025 so that restoration goals can be met.

Maryland’s Phase II WIP identifies several key implementation strategies that illustrate the role of forests in bay restoration. For example, the State’s strategy to increase natural filters of pollutants includes both an afforestation/reforestation component and a forest conservation component. Likewise, the State’s strategy for urban stormwater pollutant reduction goals includes a rural residential reforestation component and a component to increase the urban tree canopy. In addition, the State’s strategy of improving land management for water quality purposes includes a component to increase streamside forest buffers.

Policy Considerations

While Maryland has comprehensive laws, regulations, and programs in place regarding forest conservation, continued population growth, development, and associated forest loss must be managed in a manner that furthers the State policy on forest retention and sustainable management. Therefore, the General Assembly may wish to evaluate and continue to monitor whether Maryland is achieving its policy of no net loss of forest. More specifically, the General Assembly may wish to consider the following:

- **Should the Definition for No Net Loss of Forest Be Updated?**
 - ***No Net Loss Threshold:*** In Maryland, under the definition adopted by statute in 2013, “no net loss of forest” means that 40% of all land is covered by tree canopy. However, a recent assessment of 2013 data shows that tree canopy covered approximately 51% of the State’s land area in 2013. Should the tree canopy threshold be increased to more accurately reflect the actual tree canopy cover?
 - ***Tree Canopy or Forest Cover:*** Tree canopy includes forested and nonforested areas. The same assessment of 2013 data for the State shows that the forest cover was approximately 40% in 2013. Is tree canopy or forest cover the best parameter to use to implement a no net loss of forest policy?
 - ***Should There be Additional Parameters:*** Under the existing definition, the only parameter used to determine whether there is no net loss of forest is the amount of land covered by tree canopy. Should additional parameters be applied to the determination of what constitutes no net loss of forest, such as the amount of forestland, the distribution of forests within the State, the quality of the trees or forests, or the ecological benefits of forests?
- **Should the FCA be Strengthened as a Tool for Achieving No Net Loss?**
 - ***Afforestation and Reforestation Requirements:*** Do the afforestation and reforestation thresholds result in sustainable forest retention and planting? Similarly, do the formulas used to determine the afforestation or reforestation required on a development site maximize planting or mitigation opportunities?
 - ***Applicability and Exemptions:*** The FCA applies, subject to many exemptions, on areas 40,000 square feet or greater. Should the 40,000 square foot threshold be reduced or eliminated to further expand the application of the FCA? Similarly, should the exemptions be modified to allow for more coverage under the FCA?
 - ***Fee-in-Lieu:*** Do the current payments made to the State Forest Conservation Fund or local forest conservation funds in lieu of meeting requirements for reforestation

or afforestation generate adequate revenues to meet mitigation costs? Can anything be done to facilitate the use of the payments to further the purposes of the FCA, including repealing the time limits on the use of funds in the State Forest Conservation Fund or facilitating the use of municipal forest conservation funds?

- **Are Existing Forest Resource Reporting Requirements Being Met? Should They be Altered?**
 - ***Statewide Forest Inventory:*** At least every five years, DNR is required to provide a statewide forest resource inventory to local jurisdictions to be available for the local comprehensive plan review. However, in practice, DNR provides local jurisdictions with GIS tree canopy raw data upon request. Is DNR fulfilling its statutory reporting requirement? Should the State require DNR to report this information more frequently to the Governor and the General Assembly, or in a different manner, to facilitate ongoing monitoring of the effectiveness of forest conservation programs?
 - ***Stakeholder Group:*** Chapter 384 of 2013 requires DNR, following the release of the first statewide forest inventory after January 1, 2017, to convene a stakeholder group of representatives from local government, agriculture, forestry, development, conservation, and other interested parties to review the inventory and make recommendations in accordance with the State's forest management policy, including the achievement of no net loss of forest. The General Assembly should monitor the work of the stakeholder group in the event that statutory changes are warranted.

History of Major Forestry Initiatives

- 1963 Chapter 884 required the Department of Forests and Parks to establish the Forest Conservation and Management Program to allow forest landowners to contract with the Department of Natural Resources (DNR) to implement forest conservation and management practices in exchange for receiving frozen land assessment values for tax purposes.
- 1968 Chapter 672 established the State Wildlands Preservation System by authorizing DNR to designate areas in State forests and parks as areas to be managed for the preservation of their natural condition. Chapter 735 of 1971 amended the authorizing statute by granting the Governor and General Assembly the sole authority to designate wildlands by enactment of legislation but requiring DNR to recommend areas for inclusion in the wildlands system. The first wildland was designated by Chapter 444 of 1980, followed by wildlands designated by Chapter 144 of 1981, Chapter 184 of 1984, Chapter 165 of 1985, Chapter 624 of 1986, Chapter 346 of 1987, Chapter 749 of 1988, Chapter 441 of 1990, Chapters 387 and 657 of 1991, Chapter 350 of 1996, Chapters 567 and 568 of 1997, Chapter 174 of 2002, and Chapter 465 of 2014.
- 1986 Chapter 620 established the Woodlands Incentive Program financed by the woodland transfer tax and revenues generated from services provided by DNR to landowners.
- 1987 Chapter 610 established the Reforestation Law to provide for forest clearing and retention during construction and mitigation of clearing in certain situations. The law was amended in 1991, in conjunction with the passage of the Maryland Forest Conservation Act, to apply only to State highway construction.
- 1991 Chapter 255 established the Maryland Forest Conservation Act for the protection of forests and trees during development.
- 1997 The first Conservation Reserve Enhancement Program in the United States is established in Maryland to incentivize the restoration of riparian buffers on sensitive agricultural land.

Recent Forestry Initiatives

- 2008 Chapter 176 established the Task Force to Study a No Net Loss of Forest Policy to develop a plan to achieve and maintain a no net loss of forest in Maryland beginning in 2010.
- 2009 Chapter 175, the Sustainable Forestry Act, made numerous changes to improve the sustainability of Maryland's forest resources, which included (1) modifying the revenue streams for specified forestry funds and how specified funds may be used; (2) establishing that certain protections against nuisance actions that apply to agriculture also apply to silviculture; (3) establishing specific duties for the advisory Sustainable Forestry Council; and (4) addressing forestry in State and local planning processes.
- 2009 Chapter 298 was the first installment of the implementation of the findings and recommendations of the Task Force to Study a No Net Loss of Forest Policy. The legislation (1) required DNR, in cooperation with forestry stakeholders, to determine the meaning of no net loss of forest and to develop proposals for the creation of a no net loss of forest policy in Maryland; (2) tightened or repealed specific exemptions from the application of the Maryland Forest Conservation Act (FCA); (3) upgraded the standards for afforestation and reforestation under the FCA; (4) established that priority be given to specified vegetation for retention and protection; and (5) increased the fee-in-lieu contribution rate to State and local forest conservation funds from 10 cents to 30 cents per square foot of area of required planting, required that the rates be adjusted for inflation, and authorized the use of these funds for maintenance of existing forests and achieving urban canopy goals.
- 2010 Chapter 215 repealed the prohibition on the use of federal funds on projects that receive Woodland Incentives Program cost-share assistance, but limited the total State and federal cost-share assistance that a woodland owner may receive to 100% of the actual cost of the project.
- 2010 Chapters 283 and 284 repealed the requirement that, after two years or three growing seasons, unused money in a local forest conservation fund revert to the person who provided the money to be used for tree plantings.
- 2010 Chapter 466 increased the fee-in-lieu contribution rates to State and local forest conservation funds for projects outside of a priority funding area from a minimum of 30 cents to 36 cents per square foot of area of required planting, or, for inflation adjusted rates, a rate that is 20% higher than the rate for projects inside of a priority funding area.

- 2013 Chapter 384, the Forest Preservation Act (1) established the policy of the State to achieve a no net loss of forest and defined that policy as meaning that 40% of all land in Maryland is covered in tree canopy; (2) expanded the State's forest management policy to apply to publicly owned forests; (3) expanded the authorized uses of the reforestation fund to include financing the prevention of and response to forest health emergencies; (4) expanded the application of the income tax subtraction modification for reforestation, afforestation, or timber stand improvements and the practices that are considered timber stand improvements; (5) established enhanced penalties and enforcement mechanisms; (6) required DNR to provide a statewide forest resource inventory to local jurisdictions for use in performing local comprehensive plan reviews; and (7) made other adjustments to State forestry programs to reflect past experience in implementing the programs.
- 2017 Chapter 464 added an exemption from the FCA for the cutting or clearing of trees to remove an obstruction to air navigation at State licensed airports. The exemption does not apply if the cutting or clearing of trees is to facilitate the expansion or extension of the boundaries of any airport or runway.
- 2017 Chapters 794 and 795 clarified that a local forest conservation plan may include forest conservation thresholds and afforestation and reforestation requirements that are more stringent than the thresholds and requirements under the FCA.