

Department of Legislative Services
Maryland General Assembly
2019 Session

FISCAL AND POLICY NOTE
Third Reader - Revised

Senate Bill 203

(Senator Young, *et al.*)

Education, Health, and Environmental Affairs

Environment and Transportation

Natural Resources - No Net Loss of Forest - Definition

This bill changes the definition of “no net loss of forest” for the purposes of Maryland’s no net loss of forest policy. The definition changes from “40% of all land in Maryland is covered by *tree canopy*” to “40% of all land in Maryland is covered by *forest*, as determined by data used in the most current Chesapeake Bay Watershed Model” defined in the Code of Maryland Regulations (COMAR), as specified. The bill may not be interpreted to expand, limit, or otherwise disrupt specified programs conducted by a unit of State or local government.

Fiscal Summary

State Effect: The Department of Natural Resources (DNR) can implement the bill’s changes with existing budgeted resources. Revenues are not affected.

Local Effect: The bill does not materially affect local government operations or finances.

Small Business Effect: Minimal or none.

Analysis

Current Law/Background:

No Net Loss of Forest Policy

It is the policy of the State to encourage the retention and sustainable management of forest lands by, among other things, achieving “no net loss of forest,” as discussed below. “No net loss of forest” means 40% of all land in Maryland is covered by tree canopy.

Chesapeake Bay Watershed Model

COMAR defines the “Chesapeake Bay Watershed Model” as the latest model adopted by the Chesapeake Bay Program used to simulate loading and transport of nitrogen, phosphorus, and sediment from pollutant sources throughout the Chesapeake Bay watershed and provide estimates of watershed nitrogen, phosphorus, and sediment loads resulting from various management scenarios.

According to the Chesapeake Bay Program’s website, its Watershed Model incorporates information about land use, fertilizer applications, wastewater plant discharges, septic systems, air deposition, farm animal populations, weather, and other variables to estimate the amount of nutrients and sediment reaching the Chesapeake Bay and where these pollutants originate. The Watershed Model divides the 64,000-square-mile Chesapeake Bay watershed into more than 2,000 segments delineating political and physical boundaries. Each segment contains information generated by several sub-models:

- The hydrologic sub-model uses rainfall, evaporation, and meteorological data to calculate runoff and sub-surface flow for all land uses, including forest, agricultural, and urban lands.
- The surface and sub-surface flows ultimately drive the nonpoint source sub-model, which simulates soil erosion and pollutant loads from the land to rivers.
- The river sub-model routes flow and associated pollutant loads from the land through lakes, rivers, and reservoirs to the Chesapeake Bay.

To accurately simulate the Chesapeake ecosystem, models are built on current and specific uses of land in the watershed, such as forests, farms, and development. Land uses are determined using authoritative sources, such as satellite imagery and the U.S. Department of Agriculture’s Census of Agriculture. Models are further refined by inputting land management features, such as cover crops on farm fields and stormwater controls in urban areas.

History of Maryland’s Forest Conservation Act and No Net Loss of Forest Policy

The General Assembly passed the Maryland Forest Conservation Act (FCA) in 1991, which establishes minimum forest conservation requirements for land development. In addition to FCA, the State has implemented other programs and incentives to preserve and promote forest acreage.

When it was initially enacted, some stakeholders viewed FCA as a means to achieve a policy that results in no further loss of forest land in the State. This policy goal is commonly referred to as a no net loss of forest policy. However, FCA did not function as a mechanism for implementing a no net loss of forest policy. A 10-year review of FCA completed by

DNR in 2004 found that FCA had resulted in the retention of 79,174 acres of forest land, the planting of 13,611 acres of forest land, and the clearing of 42,906 acres of forest land. Thus, during the review period, more forest acreage was cleared than planted under FCA.

In 2013, in response to recommendations from the Task Force to Study a No Net Loss of Forest Policy and the Sustainable Forestry Council (an advisory body within DNR), DNR submitted a report to the General Assembly that supported a definition proposed by the Sustainable Forestry Council for “no net loss of forests,” and recommended implementing the policy. The report also noted that, regardless of the policy mechanisms used to implement a no net loss of forest policy, the State must be able to track forest losses and gains.

In response to these conclusions, the General Assembly amended FCA with the passage of Chapter 384 of 2013. That Act, among other things, established that it is the policy of the State to achieve “no net loss of forest,” meaning that 40% of all land in Maryland is covered by tree canopy. The Act also 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 database.

Forest and Tree Canopy Data for Maryland

DNR’s Forest Service relies on three main sources for measuring forest and tree canopy in the State. Among other things, this data is used to evaluate Maryland’s progress related to the State’s no net loss of forest policy.

Digital Tree Canopy Data: Two of the sources used by the Maryland Forest Service are digital raster maps: (1) the Chesapeake Conservancy’s *High Resolution Land Cover Assessment* from 2013; and (2) the University of Maryland’s *Analysis of Tree Canopy* from 2011. These maps provide detailed information about Maryland’s tree canopy. The Chesapeake Conservancy plans to update the data every two to five years. Both the University of Maryland and the Chesapeake Conservancy data are intended to make maps and to identify trees and tree canopy precisely at many scales.

U.S. Forest Service’s Forest Inventory Analysis: The U.S. Forest Service’s Forest Inventory Analysis (FIA) Program, which provides data to assess America’s forests, sends out field teams to conduct annual surveys throughout the country, including Maryland. DNR uses this data to track forest area and collect information about forest land in the State. According to DNR, FIA has identified 985 permanent forest plots across Maryland and measures one-seventh of the plots annually. FIA publishes an annual State report,

which is a compilation of seven years of information, including a statistical determination of the forest resources of the State.

Additional Information

Prior Introductions: None.

Cross File: HB 120 (Delegate Love, *et al.*) - Environment and Transportation.

Information Source(s): Department of Natural Resources; U.S. Department of Agriculture; U.S. Forest Service; Chesapeake Bay Program; Department of Legislative Services

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