

# Climate Assessment

## Office of Legislative Oversight

### BILL 18-25: FOREST CONSERVATION - TREES

#### SUMMARY

The Office of Legislative Oversight (OLO) anticipates Bill 18-25 will likely have a small, positive impact on the County's contribution to addressing climate change as it would aid in the retention of existing trees in the County, decrease requirements to install utility-scale photovoltaic facilities, and set requirements on replanting any trees lost. However, most of the proposed changes would codify the County's existing strategies for achieving its goals of no net loss of forested areas.

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#### BACKGROUND AND PURPOSE OF BILL 18-25

The Forest Conservation Act is a state law that was enacted in 1991. The law aims "to conserve forest cover on development sites by establishing rules that minimize the loss of existing forests and, in some cases, replenish forest that has been lost to development activities in the past."<sup>1</sup> Between 1993 and 2012, the Forest Conservation Act led to the retention of 189,803 acres of forest and the planting of 33,075 acres of forest across local jurisdictions in Maryland.<sup>2</sup>

In 2024, major changes went into effect for the statewide Forest Conservation Act which was first established in 1991.<sup>3</sup> These changes established more stringent forest conservation standards and required local governments to comply with state forest conservation requirements or demonstrate that local regulations have resulted in no net loss of forest to development over a four year period. Some of the changes include:

- Setting a statewide goal to increase the acreage of forested land and tree canopies;
- Increasing replanting ratio requirements for developers to replant each acre of forest cleared for development (in most cases); and
- Requiring regular reviews of local forest conservation plans by Maryland's Department of Natural Resources to ensure local plans align with state goals.<sup>4</sup>

Bill 18-25 seeks to update the Montgomery County Forest Conservation Law and Regulations to align the County Code with the statewide Forest Conservation Act. To do so, the bill recommends the following changes:

- Defining what a solar photovoltaic facility is in the County Code;
- Removing the afforestation requirements for solar photovoltaic facilities, which is required by state law;
- Adding four new categories to the priorities of forest retention as outlined by state law which include urban forest retention, water quality, and forests suitable for "forest interior-dwelling species"; and

- Removing significant trees from the Tree Save Plan requirements, which includes trees part of a historic site or associated with a historic structure and trees of a certain height and diameter as outlined in County regulations.<sup>5</sup>

Bill 18-25 would also reinstate forest mitigation retention banks or existing forest banks. These were previously eliminated by a state law passed in 2021.<sup>6</sup> Retention banks allow developers to purchase credits that protect existing forests instead of replanting trees after clearing a forested area. Two acres of retention bank credit equals one acre of planted forest.<sup>7</sup> However, in accordance with state law, Bill 18-25 would allow only 50 percent of the replanting requirement to be met via retention bank credits. The other 50 percent would need to be fulfilled by replanting trees according to the County's Forest Conservation Law.<sup>8</sup>

Bill 18-25, Forest Conservation – Trees was introduced by the Council President at the request of the Planning Board on June 17, 2025.

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## METHODOLOGIES, ASSUMPTIONS, AND UNCERTAINTIES

**Methodology.** OLO reviewed Maryland state law, County Code, staff reports, and literature regarding forest retention and its impact on climate goals. OLO also interviewed Planning Department staff.

**Assumptions.** Many of the proposed requirements are already carried out by the Planning Department. The proposed changes will just codify many of the practices and strategies the Planning Department already employs.

**Uncertainties.** OLO is unable to discern how much forest will be retained by reinstating forest mitigation retention banks, nor how many solar photovoltaic facilities would be built by removing afforestation requirements on these facilities.

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## NO NET LOSS FORESTS AND COUNTY'S CLIMATE GOALS

Since the launch of Montgomery Planning's No Net Loss of Forest initiative in 2021, the County's forest retention goals shifted towards both increasing forest planting and protecting existing forests.<sup>9</sup> An amendment to the Montgomery County Forest Conservation Law, enacted in 2023, followed this no net loss initiative and set the County's goals to achieve "an equal or greater area of forest planted than forest removed on a County-wide level, by projects subject to the Montgomery County Forest Conservation Law."<sup>10</sup> The County's forest goals are similar to Maryland's statewide goals of increasing the forest and tree canopy acreage.<sup>11</sup>

Reforestation and afforestation requirements on development projects are two ways to achieve no net loss. Reforestation is when forests are planted where a previous forest was cut down for development and

afforestation is where a new forest is established in an area where there were no trees before.<sup>12</sup> Some developments in the County are subject to both reforestation and afforestation requirements.<sup>13</sup>

Reforestation and retaining forests have many positive impacts on greenhouse gas emissions, community resilience, and the environment including:

- Forests can remove carbon dioxide from the atmosphere and store it. Additionally, trees help to filter particulate matter and improve air quality;<sup>14</sup>
- Tree roots can stabilize soil which decreases erosion. This decreases the amount of sediment and nutrient runoff into streams and rivers;<sup>15</sup>
- Forests can increase and retain biodiversity by providing habitats for species, especially those that are endangered or threatened; and<sup>16</sup>
- Trees in urban areas can reduce the temperature and cool local heat island effects. A study found that on average, urban areas with urban forests were approximately 3 degrees Fahrenheit cooler compared to urban areas without urban forests.<sup>17</sup>

Further, the update to state law, which many of the proposed updates to the County Code mirror, will likely have a positive impact on forests and water quality. One change is requiring developers with unforested stream buffers to reforest areas to protect stream and water quality. However, Planning Department staff assert that many of the proposed changes codify into County Code existing strategies that the Planning Department already employs.<sup>18</sup>

**Solar Voltaic Facilities.** The proposed definition for solar photovoltaic facilities is meant to address the development of utility-scale facilities approved by the Maryland Public Service Commissions, which would cover approximately 12 acres of land on average. These facilities may **not** be subject to afforestation requirements but would be subject to all other requirements, including reforestation.<sup>19</sup> Removing afforestation requirements for utility-scale solar photovoltaic facilities would likely make it more cost effective for these facilities to be built while still enforcing reforestation requirements around the proposed site. Utility-scale solar facilities are essential to meet state and County goals which are:

- Maryland statewide goals are to have at least 14.5% of electricity sold in Maryland to be from solar resources by 2028; and <sup>20</sup>
- Montgomery County's greenhouse gas emission goals, as described by the Climate Action Plan, are to decrease County greenhouse gas emissions by 80% by 2027 and 100% by 2035. Clean, renewable energy, which includes solar energy, is crucial to meeting these goals.<sup>21</sup>

**Forest Mitigation Banks.** The proposed changes would reinstate forest mitigation banks and set requirements on forest retention banks. Forest retention banks can be thought of as existing forests that are privately owned and owners can sell credits that correspond to existing trees, to help meet the purchaser's required reforestation and afforestation for a project. Forest retention banks can help preserve existing forests as it allows the owner of the forest to make a profit without cutting trees down.<sup>22</sup> Further, the proposed requirement for retention banks is a two-to-one ratio where two acres must be protected and preserved for

every acre cut down for development. However, developers would only be able to use forest retention banks to fulfill 50% of their replanting requirements. Overall, this change should create an incentive for owners of forested areas to preserve trees rather than cutting them down and aligns with the County's no net loss goals.

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## ANTICIPATED IMPACTS

In 2023, Maryland updated the state's Forest Conservation Act, which revised forest preservation and mitigation requirements, restore the use of forest retention banking, and set the state's goal for increasing the acreage of forests and tree canopies. Planning Department staff states many of the proposed changes that align the County Code with the updated state laws fall in line with what work the Planning Department already does. According to Planning Department staff, the changes proposed in Bill 18-25 primarily reinforce and codify the County's existing strategies for achieving no net loss of forest.

The two main changes highlighted by Planning Department staff are the reinstatement of forest mitigation banks, specifically forest retention banks, and removing afforestation requirements for utility-scale solar voltaic facilities.

**Greenhouse Gas Emissions.** Forests can remove carbon dioxide from the environment and store it. Protecting existing trees can retain this storage, especially since larger and older trees can store more carbon dioxide compared to smaller, newly planted trees.<sup>23</sup> The proposed changes could also encourage utility-scale photovoltaic facilities to be built, which would be a source of renewable, clean energy for utilities that service the County.

**Community Resilience.** Trees, especially in urban areas, can decrease local temperatures and absorb particulate matter in the air, improving air quality for residents. Trees are an important tool for building community resilience against extreme heat events.<sup>24</sup>

OLO anticipates the Bill would have a small, positive impact on the County's contribution to addressing climate change as it would aid in the retention of existing trees in the County, decrease requirements to install utility-scale photovoltaic facilities, and set requirements on replanting any trees lost. However, most of the proposed changes would codify the County's existing strategies for achieving its goals of no net loss of forested areas.

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## RECOMMENDED AMENDMENTS

The Climate Assessment Act requires OLO to offer recommendations, such as amendments or other measures to mitigate any anticipated negative climate impacts.<sup>25</sup> OLO does not offer recommendations or amendments as Bill 18-25 is likely to have a small, positive impact on the County's contribution to addressing climate change, including the reduction and/or sequestration of greenhouse gas emissions, community resilience, and adaptative capacity.

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## CAVEATS

OLO notes two caveats to this climate assessment. First, predicting the impacts of legislation upon climate change is a challenging analytical endeavor due to data limitations, uncertainty, and the broad, global nature of climate change. Second, the analysis performed here is intended to inform the legislative process, not determine whether the Council should enact legislation. Thus, any conclusion made in this statement does not represent OLO's endorsement of, or objection to, the bill under consideration.

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## PURPOSE OF CLIMATE ASSESSMENTS

The purpose of the Climate Assessments is to evaluate the anticipated impact of legislation on the County's contribution to addressing climate change. These climate assessments will provide the Council with a more thorough understanding of the potential climate impacts and implications of proposed legislation, at the County level. The scope of the Climate Assessments is limited to the County's contribution to addressing climate change, specifically upon the County's contribution to greenhouse gas emissions and how actions suggested by legislation could help improve the County's adaptive capacity to climate change, and therefore, increase community resilience.

While co-benefits such as health and cost savings may be discussed, the focus is on how proposed County bills may impact GHG emissions and community resilience.

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## CONTRIBUTIONS

OLO staffer Kaitlyn Simmons drafted this assessment.

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<sup>1</sup> ["A Citizen's Guide to the Forest Conservation Act in Maryland," Chesapeake Bay Foundation, June 2004, pg. 5.](#)

<sup>2</sup> ["Maryland's Forest Conservation Act: 25-Year Review," Maryland Forest Service and Maryland Department of Natural Resources, pgs. 4-5.](#)

<sup>3</sup> [SB0526, Natural Resources - Forest Preservation and Retention, Maryland General Assembly, Effective Dates July 1, 2023, July 1, 2024.](#)

<sup>4</sup> [Ibid.](#)

<sup>5</sup> [Introduction Staff Report for Bill 18-25, Forest Conservation - Trees, Montgomery County Council, Introduced June 17, 2025.](#)

<sup>6</sup> There are two types of forest mitigation banks in Maryland: those that protect existing forest (retention banks) and those where new trees are planted (planted banks). In 2021, the Maryland General Assembly passed a law that halted the creation of new retention banks and allowed existing ones to sell credits only until June 30, 2024. From [Aditi Dubey, "Replace or protect? A core issue in forest mitigation banking," Bay Journal, December 13, 2023.](#)

<sup>7</sup> ["Purchasing Credits from a Forest Mitigation Bank", Montgomery Planning, Accessed July 3, 2025.](#)

<sup>8</sup> Introduction Staff Report for Bill 18-25.

<sup>9</sup> ["No Net Loss of Forest initiative", Montgomery Planning, Accessed July 3, 2025.](#)

<sup>10</sup> ["Staff Report: No Net Loss of Forest Amendments to the Forest Conservation Law and Regulations", Montgomery Planning, April 14, 2022.; Bill 25-22, Forest Conservation - Trees, Montgomery County Council, Effective April 3, 2023.](#)

<sup>11</sup> ["Assembly approves major changes to Forest Conservation Act", NAIOP Maryland Chapter, May 17, 2023.](#)

<sup>12</sup> ["Glossary of Climate Change Terms", U.S. Environmental Protection Agency, Accessed July 3, 2025.](#)

<sup>13</sup> ["Montgomery County Forest Conservation Law", Montgomery Planning, Accessed July 3, 2025.](#)

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- <sup>14</sup> ["How Forests Offset Climate Change and Its Impacts", Connecticut Department of Energy and Environmental Protection, Accessed July 3, 2025.](#)
- <sup>15</sup> ["From Forests to Faucets: Where does your drinking water come from?", US Forest Service, March 22, 2022.](#)
- <sup>16</sup> ["Carbon Sequestration through Reforestation: A Local Solution with Global Implications", U.S. Environmental Protection Agency, March 2012.](#)
- <sup>17</sup> ["Benefits of Trees and Vegetation", U.S. Environmental Protection Agency, Accessed July 3, 2025.](#)
- <sup>18</sup> Staff feedback
- <sup>19</sup> Introduction Staff Report for Bill 18-25
- <sup>20</sup> ["Solar in Maryland: Maryland Policies", Maryland Public Service Commission, Accessed July 3, 2025.](#)
- <sup>21</sup> ["Montgomery County Climate Action Plan", Montgomery County Government, June 2021.](#)
- <sup>22</sup> ["Replace or Protect? A Core Issue in Forest Mitigation Banking", Dubey, A., Bay Journal, December 13, 2023.](#)
- <sup>23</sup> ["Large Old Trees Grow Fastest, Storing More Carbon", U.S. Geological Survey, January 15, 2014.; "Rate of tree carbon accumulation increases continuously with tree size", Stephenson, N. L., et. al., Nature, January 15, 2014.](#)
- <sup>24</sup> ["Using Trees and Vegetation to Reduce Heat Islands", U.S. Environmental Protection Agency, Accessed July 3, 2025.](#)
- <sup>25</sup> Bill 3-22, Legislative Branch – Climate Assessments – Required, Montgomery County Council, Effective date October 24, 2022