Office of Legislative Oversight

Bill 40-23: Tree Canopy and Roadside Tree Requirements – Fee Revisions

SUMMARY

The Office of Legislative Oversight (OLO) anticipates Bill 40-23 will have a positive impact on the County's contribution to addressing climate change. Adjusting the fee structure for trees removed would likely increase the capacity of tree planting programs in the County. Trees provide environmental benefits that are beneficial for both the County's climate goals and community resilience.

BACKGROUND AND PURPOSE OF BILL 40-23

The County charges permit applicants a fee for the removal of a tree in the County's right-of-way or for development requiring a sediment control permit.

Under the County's roadside tree law, permit applicants remove a roadside tree in the County's right-of-way must pay a fee to the Street Tree Planting Fund, which is maintained by the Department of Transportation (DOT).¹

Under the County's sediment control laws, any development activity that requires a property owner to acquire a sediment control permit must either plant new shade trees or pay a fee to the Tree Canopy Conservation Account.² In general, a sediment control permit is required if an activity:

- Disturbs more than 5,000 square feet of land including cutting trees;
- Constructs a new primary residential or commercial building; or
- Moves 100 cubic yards or more of earth on or off the property.³

The purpose of Bill 40-23 is to change the fee structures for the Street Tree Planting Fund and the Tree Canopy Conservation Account, as current fees do not adjust for inflation and have been insufficient to cover the actual costs of tree planting and maintenance. For the Street Tree Planting Fund, the proposed fee for removing a tree in the County's right-of-way is \$450 per tree, with a biannual increase based upon inflation. For the Tree Canopy Conservation Account, the proposed fee is \$470 per tree charged to applicants of the sediment control permit, with a biannual increase based upon inflation.⁴

Bill 40-23, Tree Canopy and Roadside Tree Requirements – Fee Revisions was introduced by the Council on November 7, 2023.

METHODOLOGIES, ASSUMPTIONS, AND UNCERTAINTIES

Methodology. OLO reviewed the County Code, County data on tree planting programs, and conducted a literature review of the impacts of tree planting upon climate change and community resilience.

Assumptions. OLO assumes the increased fee per tree for the Tree Canopy Conservation Account and Street Tree Planting Fund will increase the capacity of tree planting programs affected by this Bill and allow for more trees to be planted.

Uncertainties. The number of trees to be planted per year via these programs is difficult to predict as it depends on the removal of street trees and from developments large enough to require a sediment control permit. It is also dependent on the fees received from permittees.

COUNTY TREE PROGRAMS AND THE BENEFITS OF PLANTING SHADE TREES

There are two County programs which would be impacted by the change in fee structures: Tree Montgomery and the Street Tree Planting Fund.

Tree Montgomery. Bill 35-12, Trees – Tree Canopy Conservation , enacted July 23, 2013, was intended to "provide for mitigation when tree canopy is lost or disturbed to offset the environmental impacts of development and address the loss of environmental resources, including trees and potential growing space for shade trees."⁵ Montgomery County's Tree Canopy Law also established the Tree Canopy Conservation Account, a dedicated fund that may be used exclusively to plant and establish shade trees through the Tree Montgomery program. Tree Montgomery is a program that plants shade trees for free on various properties, including private property, apartments, schools, congregations, and County facilities.⁶

Through the Tree Canopy Law, any development that requires a sediment control permit must either plant trees or pay for the planting of trees to the Tree Canopy Conservation Account, based on a formula that considers the square footage of area disturbed by development⁷ (see table below).

Area of the Limits of Disturbance (Sq. Ft.)	Number of Shade Trees Required
1 - 6000	3
6001 - 8000	6
8,001 – 12,000	9
12,001 – 14,000	12
14,001 - 40,000	15

Source: Bill 35-12 - Trees - Tree Canopy Conservation

From FY14 through FY23, \$6,117,774 was paid to the Tree Canopy Account and 10,743 shade trees were planted by Tree Montgomery. According to the FY22 annual report, the average cost per shade tree for all years combined was \$436 and the fee collected per tree via the sediment control permit has remained at \$250 per tree since the law was enacted in 2013.⁸ Bill 40-23 would raise the fee to \$470 which would cover the average cost per shade tree and increase the funds available for planting trees. Executive Branch staff report the current fee does not cover the planting of trees. Since the law was enacted, approximately 24,000 trees have been earmarked for planting from the sediment control permit applications, however only 10,800 trees have been funded via the fee collections. Staff report they have been able to secure grants to fund trees to be planted, however grant funding will run out and it is not guaranteed more grants can be secured.⁹

Since 2014, the program has grown exponentially, from 47 trees planted by Tree Montgomery in FY14 to 3,663 trees planted in FY23. Executive staff report the demand for more shade trees has not slowed and intend to target areas in the County where there is little tree canopy and areas in need of additional shade.¹⁰

Street Tree Planting Fund. The other program that would be impacted by the Bill is the Street Tree Planting Fund. Under the County's roadside tree law, a permittee who removes a tree in the County's right-of-way generally must pay a fee to the Street Tree Planting Fund maintained by DOT.¹¹ For every street tree removed, three more trees are required to be planted. On average, the County plants about 2,000 trees per year through the Street Tree Planting Fund.¹²

DOT is also responsible for the maintenance of over 250,000 trees in the dedicated County right-of-way and conducts other activities such as tree stump removal, pruning and maintenance of street trees. Staff report there is a backlog for all activities the program conducts, especially for tree stump removal. Tree stumps often prevent trees from being planted around and near the stump.¹³

Fees collected by the Street Tree Planting Fund may only be used for planting new trees. However, the current fee of \$250 per tree does not cover the costs of planting the replacement trees. Funds from the general fund cover the costs of planting the tree, which reduces the funds available for maintenance of existing trees and stump removal. This underfunding ultimately impacts where trees can be planted and the health and stock of trees in the County.¹⁴ Increasing the fee to \$450 per tree would likely allow more trees to be planted and an increase in available funds for tree maintenance and stump removal.

Benefits of Planting Shade Trees. Trees provide many environmental benefits that improve local climate conditions and community resilience and the development of tree canopies can compound these benefits. For example:

- Tree canopies can substantially decrease daytime air temperature and reduce urban heat island effects;¹⁵
- Trees, specifically forests and dense clumps of trees, remove pollutants and sediments from rainfall and slowly release water back into the drinking water supply, including underground aquifers;¹⁶
- Trees can improve drainage in areas prone to flooding, especially during heavy rainfall as they absorb rainwater and slowly release the water back;¹⁷
- Trees absorb and store carbon dioxide, which can slow the CO2 buildup in the atmosphere. More mature and larger trees store more carbon than younger trees;¹⁸ and
- Research has shown associations between the presence of trees and greenspaces and improvements in mental and physical health.¹⁹

Planting more trees positively impacts the County's climate goals and increases community climate resilience. While these benefits depend on a tree's type, size, and maturity, the County tree programs impacted by this bill promote tree planting to provide shade and environmental benefits. Trees planted by Tree Montgomery are 10-12 feet tall at installation (and eventually reach 50 or more feet), provide shade, and are native to either the Mid-Atlantic region or the Southeastern region.²⁰

ANTICIPATED IMPACTS

OLO anticipates Bill 40-23 will have a positive impact on the County's contribution to addressing climate change, including community resilience. Changing the fee structure for the impacted tree planting programs to better reflect the costs associated with planting and maintenance, would likely increase the capacity of the programs to plant more trees. Currently, the Tree Montgomery program does not have funds necessary to plant trees earmarked by the sediment control permits. The Street Tree Planting Fund also has a backlog of trees to be planted and the fee is not sufficient to cover the costs of planting replacement trees. Increasing the fees would allow for more funding, which would likely increase the number of trees planted. Trees have many benefits to both environmental and human health.

Greenhouse Gas Emissions. Trees absorb and store carbon dioxide which can slow CO2 buildup in the atmosphere. However, the amount to which trees absorb and store CO2 depends on many factors, such as the density of tree planting, the type of tree, and the maturity of the tree.²¹

Community Resilience. Planting trees, especially with the intent to build tree canopy cover through these programs, can improve community resilience. Community resilience can be improved through environmental and human health conditions that trees provide such as:

- Building up tree canopy cover in areas with less coverage, daytime air temperature can be substantially reduced in these areas, which can alleviate human health issues associated with high temperatures;²²
- Trees can reduce flooding during heavy rainfall and improve stormwater management in urban settings²³; and
- Trees have also been shown to improve both physical and mental health as trees and greenspaces are strongly linked to reduced symptoms of depression and better reported moods.²⁴ The presence of trees and urban greenspaces is also associated with increased physical exercise.²⁵

RECOMMENDED AMENDMENTS

The Climate Assessment Act requires OLO to offer recommendations, such as amendments or other measures to mitigate any anticipated negative climate impacts.²⁶ OLO does not offer recommendations or amendments as Bill 40-23 is likely to have a 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.

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.

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 adaptative 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.

CONTRIBUTIONS

OLO staffer Kaitlyn Simmons drafted this assessment.

- ⁴ <u>Introduction Staff Report for Bill 40-23</u>, Montgomery County Council, Introduced 11/07/2023
- ⁵ Bill <u>35-12 Trees Tree Canopy Conservation,</u> Montgomery County Council, Signed into law 7/31/2023
- ⁶ <u>Montgomery County Tree Canopy Law Annual report FY22,</u> Tree Montgomery, March 2023

⁸ Montgomery County Tree Canopy Law Annual report - FY22, Tree Montgomery, March 2023

⁹ Feedback from County Staff

¹⁰ Feedback from County Staff

¹¹ Introduction Staff Report for Bill 40-23, Montgomery Council, Introduced 11/07/2023

¹² <u>Highway Services - Tree Maintenance,</u> Montgomery County Department of Transportation, Accessed 11/18/2023

¹³ Feedback from County Staff

¹⁴ Feedback from County Staff

¹⁵ <u>"Scale-dependent interactions between tree canopy cover and impervious surfaces reduce daytime urban heat during summer"</u>, Ziter, C. D., et al., The Proceedings of the National Academy of Sciences (PNAS), 2/19/2019.

¹⁶ <u>"From Forests to Faucets: Where does your drinking water come from?", U.S. Forest Service, 03/22/2022.</u>

¹⁷ <u>"Forests for Flood Buffers",</u> Maryland Department of Natural Resources, Accessed 11/18/2023.

¹⁸ <u>"Brief Report: Tree planting has the potential to increase carbon sequestration capacity of forests in the United States"</u>, Domke, G. M., et. a;., The Proceedings of the National Academy of Sciences (PNAS), 10/06/2023.; <u>"Carbon Storage by Urban Forests"</u>, U.S. National Park Service, Accessed 11/18/2023.

¹⁹ <u>"The Benefits and Limits of Urban Tree Planting for Environmental and Human Health",</u> Pataki, D. E., et. al, Frontiers, April 8, 2021.; <u>"The social and economic value of cultural ecosystem services provided by urban forests in North America: A review and suggestions for future research</u>", Nesbitt, L., et. al., Urban Forestry and Urban Greening, July 2017.

²⁰ <u>"Tree Planting Locations | Open Data Portal",</u> dataMontgomery, Accessed 11/18/2023; <u>"Request County to Plant a Tree",</u> Montgomery County, MD 311, Accessed 11/18/2023

²¹ <u>"Brief Report: Tree planting has the potential to increase carbon sequestration capacity of forests in the United States",</u> Domke, G. M., et. a;., The Proceedings of the National Academy of Sciences (PNAS), 10/06/2023; <u>"Carbon Storage by Urban Forests",</u> U.S. National Park Service, Accessed 11/18/2023.

²² <u>"Scale-dependent interactions between tree canopy cover and impervious surfaces reduce daytime urban heat during summer"</u>, Ziter, C. D., et al., The Proceedings of the National Academy of Sciences (PNAS), 2/19/2019.

²³ <u>"NPDES: Stormwater Best Management Practice, Urban Forestry",</u> United States Environmental Protection Agency, Accessed 11/18/2023.

²⁴ <u>"The Benefits and Limits of Urban Tree Planting for Environmental and Human Health"</u>, Pataki, D. E., et. al, Frontiers, April 8, 2021.

²⁵ <u>"The social and economic value of cultural ecosystem services provided by urban forests in North America: A review and suggestions for future research",</u> Nesbitt, L., et. al., Urban Forestry and Urban Greening, July 2017.

²⁶ Bill 3-22, Legislative Branch – Climate Assessments – Required, Montgomery County Council, Effective date October 24, 2022

¹ Introduction Staff Report for Bill 40-23, Montgomery County Council, Introduced 11/07/2023

² Montgomery County Tree Canopy Law Annual report - FY22, Tree Montgomery, March 2023

³ <u>Tree Laws and Programs</u>, Department of Environmental Protection, Accessed 11/18/2023

⁷ For development that exceeds 40,000 square feet of disturbance, the minimum number of shade trees required must be prorated using the ratio of 15 trees per 40,000 square feet.