

CLIMATE ASSESSMENT FOR

ZTA # 23-08 Transferable Development Rights - Cemetery

PURPOSE OF CLIMATE ASSESSMENTS

The purpose of the Climate Assessments is to evaluate the anticipated impact of master plans and zoning text amendments (ZTAs) on the county's contribution to addressing climate change. These assessments will provide the County Council with a better understanding of the potential climate impacts and implications of proposed master plans and ZTAs, at the county level. The scope of the Climate Assessments is limited to addressing climate change, specifically the effect of land use recommendations in master plans and ZTAs on greenhouse gas (GHG) emissions and sequestration, and how actions proposed by master plans and ZTAs could improve the county's adaptive capacity to climate change and increase community resilience.

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

SUMMARY

The Montgomery County Planning Board anticipates that ZTA 23-08 have both slight to moderate negative impacts as well as slight positive impacts on the county's goals of addressing greenhouse gas emissions, carbon sequestration, and ensuring resilience and adaptive capacity of our communities, depending on the performance factor. Overall, more impacts are slightly negative than positive.

BACKGROUND AND PURPOSE OF ZTA 23-08

This ZTA would modify the current prohibition on building cemeteries in the AR zone on land encumbered with a TDR easement to all expansions of existing cemeteries to occur. The establishment of new cemeteries would still be prohibited.

VARIABLES THAT COULD AFFECT THE ASSESSMENT

[List the climate-related and non-climate related variables that were considered in the assessment. Climate related variables include the various GHG reduction, sequestration, resilience, and adaptive capacity activities in the climate assessment checklists (see Tables 1 and 8 and associated text) contained in the *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County, or other variables identified in the assessment.*]

CLIMATE-RELATED VARIABLES

Transportation- Vehicle miles traveled by type, Number of trips

Building Embodied Emissions – Pavement infrastructure, Material waste produced

Land Cover and Management – Area of forest, Area of non-forest tree canopy, Area of green cover

RESILIENCE-RELATED VARIABLES

Exposure-Related Factors – Activity in flood-risk areas, Exposure to other hazards

Sensitivity-Related Factors – Change to forest cover, Change to non-forest tree canopy, Change to quality or quantity of other green areas, Change in perviousness, Change in stormwater management system treatments, Change to water quality or quantity, Change to air quality

ADAPTIVE CAPACITY-RELATED VARIABLES

Change to accessibility or prevalence of community and public spaces, Change to accessibility or prevalence of local food sources and other goods, Change to community connectivity

OTHER VARIABLES

Other variables include the number and frequency of events at each permitted site, transportation options, and where the sites are located.

ANTICIPATED IMPACTS

The ZTA is anticipated to result in slight negative impacts on greenhouse gas emissions, sequestration, and community resilience, and a combination of negative and positive impacts on adaptive capacity as described in more detail below. Due to the uncertainty of the locations of the expanded cemetery sites and intensity of use, data are not obtainable to quantify the greenhouse gas emissions and sequestration impacts.

GREENHOUSE GAS EMISSIONS, CARBON SEQUESTRATION, AND DRAWDOWN

ZTA 23-08 is anticipated to have slight negative impacts on greenhouse gas emissions and carbon sequestration. Note: The *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County* indicates that carbon sequestration, drawdown, and reduction are generally used interchangeably. The *Recommendations* document uses the term sequestration.

The transportation-related impacts are primarily due to the ZTA activities occurring in the Agricultural areas of the county, which tend to be located farther away from population-centers that would be the origin points for many of the trips taken. In addition, transportation options to access the cemeteries are more limited in the agricultural zones, with travel by individual automobile likely the most prevalent form of transportation, increasing vehicle miles traveled. The expansion of the cemeteries could increase the number of burials at these sites, increasing the number of trips. Overall, these impacts are expected to be slight because the number of cemeteries adjacent to TDR easements in the agricultural zone are limited.

Building embodied emissions are also expected to be slight. The primary sources of additional building embodied emissions are expected to come from additional pavement for drive aisles and parking, and from additional material waste generated by people attending the expanded number of burials that may be generated by expanding the cemeteries.

Impacts to sequestration from Land Cover Change and Management are also expected to be slight. There may be reductions in area of forest, area of non-forest tree canopy, and area of natural ground cover if these areas are cleared and graded to make room for the cemetery expansion, reducing the amount of carbon sequestered and stored.

COMMUNITY RESILIENCE AND ADAPTIVE CAPACITY

ZTA 23-08 is anticipated to have slight negative impacts to community resilience, and slight positive and potentially more significant negative impacts to community adaptive capacity.

Community resilience could be negatively impacted by increased exposure to the hazardous effects of climate change, including increased potential exposure to floods, storms, and temperature extremes. Changes to sensitivity-related factors may include changes (reductions) to forest cover and non-forest tree canopy, changes to the quality or quantity of other green areas, loss of some pervious land covers, increased stormwater management structures that alter natural flows and infiltration of precipitation runoff. The latter impacts have the potential to reduce water quality and quantity, affecting water supply and quality for both humans and natural systems. Slight negative impacts to air quality may result from increased motor vehicle trips and vehicle miles traveled generated by additional burials in the agricultural zones.

There could be slight positive impacts to community adaptive capacity as the expanded cemeteries create more opportunities for the public to gather and promote community connectedness and

cohesiveness, strengthening support networks and increasing communication. These are seen as helpful to building adaptive capacity to respond to climate disruptions. The availability or distribution of economic and financial resources may be increased if expanded cemeteries increase staffing levels needed for cemetery operations and maintenance, and if the number of commercially sold cemetery plots is increased.

ZTA 23-08 has a potential to have a more significant negative impact on the accessibility of local food sources and other goods if large areas of currently farmed lands are converted to expanded cemetery space. The severity of this loss of farmland and associated food crops depends on the extent to which the cemeteries that qualify for expansion under this ZTA take advantage of the opportunity, and how large each expansion becomes.

RELATIONSHIP TO GREENHOUSE GAS REDUCTION AND SEQUESTRATION ACTIONS CONTAINED IN THE MONTGOMERY COUNTY CLIMATE ACTION PLAN (CAP)

ZTA 23-08 does not involve any GHG activities that relate to the GHG reduction actions from the County's Climate Action Plan. The ZTA does relate to several of the sequestration actions, and the ZTA has the potential to negatively affect the ability of the County to achieve goals related to the following CAP actions:

- S-1 Retain and Increase Forests
- S-2 Retain and Increase Tree Canopy
- S-3 Restore and enhance meadows and wetlands
- S-5 Restore soil fertility, microbial activity, and moisture-holding capacity

None of these actions were rated for reduction potential as evaluated within the CAP.

RECOMMENDED AMENDMENTS

The Climate Assessment Act requires the Planning Board to offer appropriate recommendations such as amendments to the proposed ZTA 23-08 or other mitigating measures that could help counter any identified negative impacts through this Climate Assessment. Since any land disturbance greater than 5,000 square feet should initiate application of the Forest Conservation Law, the requirements of the Law might incentivize forest preservation, and provide mitigation for forest removal.

SOURCES OF INFORMATION, ASSUMPTIONS, AND METHODOLOGIES USED

The climate assessment for ZTA 23-08 was prepared using the methodology for ZTAs contained within the *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County, December 1, 2022*.