Montgomery Planning

CLIMATE ASSESSMENT FOR

ZTA 23-09 Farming-Incidental Outdoor Stays

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

This ZTA expands on the definitions of Agritourism and Farming to include "incidental outdoor stays."

Under the current zoning ordinance, accessory agricultural education and tourism activities may be conducted as a part of a farm's regular operations, as an accessory use to Farming. Accessory agricultural education and tourism activities include corn mazes, hay rides, and educational tours, classes, and workshops. ZTA 23-09 would include incidental outdoor stays in that list.

Incidental outdoor stays will be allowed in separate structures from the primary residence, with certain limits on the number of persons, days, and facilities.

BACKGROUND AND PURPOSE OF ZTA 23-09

This is enabled by State legislation that passed in 2022 allowing local jurisdictions to establish this use as a part of farming, and to set their own working definitions. ZTA 23-09 would enable overnight stays on farms in the AR zone that also have accessory agriculture education and tourism activities conducted as part of the farm's regular operations.

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, Non-vehicle modes of transportation

Building Embodied Emissions – Building square footage, Building life span, Pavement infrastructure, Material waste produced, Use of green building materials

Energy – Electricity usage, Stationary fuel usage

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, Potential for shelters to be inadequately designed and built to protect people from exposure to climate 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, Infrastructure design decisions.

ADAPTIVE CAPACITY-RELATED VARIABLES

Change to emergency response and recovery capabilities, Change to accessibility or prevalence of local food sources and other goods, Change in availability or distribution of economic and financial resources, Change to community connectivity, Change in distribution of resources and support.

OTHER VARIABLES

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

ANTICPATED IMPACTS

The ZTA is anticipated to result in slight to moderate negative impacts on greenhouse gas emissions, sequestration, and community resilience, and a combination of negative and positive impacts on adaptive capacity as described in greater detail below. Due to the uncertainty of the locations of these uses, the size and types of buildings, design of infrastructure, 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 23-09 is anticipated to have slight to moderate 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 farms offering incidental overnight stays are more limited in the agricultural zones, with travel by individual automobile likely the most prevalent form of transportation, increasing vehicle miles traveled and number of trips. The greenhouse gas emissions from transportation could be significant, depending on the number of farms that choose to offer incidental overnight stays.

The building embodied emissions result from the potential construction of the structures that will house the guests who are staying on the farms, and any incidental pavement for access and parking. These emissions could be moderate, as there are limitations on the allowable number of buildings (ten) and the number of occupants (a maximum of 2 people who are 18 years or older).

Building energy emissions will depend on the sources and distribution of energy used and for the heating, lighting and incidental electricity consumed. Additional energy emissions will be associated with the preparation of any meals served at the principal building. These emissions could be reduced or eliminated through the use of clean energy generated on-site.

Impacts to sequestration from Land Cover Change and Management could be slight to moderate. 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 new buildings, access and parking, reducing the amount of carbon sequestered and stored.

COMMUNITY RESILIENCE AND ADAPTIVE CAPACITY

ZTA 23-09 is anticipated to have slight to moderate 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.

Water quality could also be negatively impacted if septic systems are improperly located and sized to handle the additional sewage generated from the increased number of visitors and length of stay. Due to the provision that allows a stay of up to four days per week, water usage for showers, etc. could also increase water use. Water sources could become strained if overused.

Negative impacts to air quality may result from increased motor vehicle trips and vehicle miles traveled generated by additional travel to and through the agricultural zones.

There could be slight positive impacts to community adaptive capacity as the incidental overnight stay events 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 as this new use introduces a new source of revenue for farms. The use may also generate additional employment opportunities if staff is hired to help care for the guests and build and maintain the guest structures, and may create additional visits to local businesses.

ZTA 23-09 has a potential to have both positive and negative impacts on the accessibility of local food sources and other goods. The new uses will bring more people to farms, and may provide opportunities for people to obtain fresh produce during their incidental stays. The impacts could be negative if large areas of currently farmed lands are converted to the buildings and infrastructure created to house the people staying on the farms. The severity of this loss of farmland and associated food crops depends on the extent to which farms that qualify for the new use 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 23-09 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 23-09, 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. Not protected through the Forest Conservation Law are the production of existing food production, or the protection of high-quality soils, which are generally those soils identified by the US Department of Agriculture as Soil Classification Category I or Soil Classification Category II. Planning Staff recommend the use standards for Incidental Outdoor Stays include prohibition on placing structures associated with Incidental Outdoor Stays on land currently used for food production, or that are classified as Soil Classification Category I or II soils.

While not fully appropriate for a ZTA, it may be beneficial to think of ways to ensure that Incidental Overnight Stays are not just co-located with but are fully immersed in Agritourism activities. This could include inclusion in farm outreach and education components to demonstrate regenerative agricultural techniques to incidental overnight stay guests. This may help distinguish this use from existing definitions of lodging or Bed and Breakfast uses.

SOURCES OF INFORMATION, ASSUMPTIONS, AND METHODOLOGIES USED

The climate assessment for ZTA 23-09 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*.