

TAME Coalition comments on draft Climate Action Plan Montgomery County Maryland

February 28, 2021

TAME Coalition appreciates this opportunity to provide comments on the draft Climate Action Plan for Montgomery County, Maryland. These comments are submitted to County Executive Elrich and his climate team.

Our comments center on the Transportation section of the draft CAP. We are focused on two core changes needed in this Transportation section: (a) the need to fundamentally shift from car-centric to people-centric modes of transportation (also termed "mode shift" for short); and (b) the need to adopt and implement the No New Highways policy recommended by the Transportation Technical Working Group, and to remove proposed M-83 highway from the Master Plans as the first step to implement this policy.

Outline of TAME Coalition's CAP comments

- I. Request inclusion of the entire set of specific recommendations from the Transportation Technical Work Group in Montgomery County's Climate Action Plan.
- II. Comments on the draft Climate Action Plan Transportation Section.
 - A. TAME Coalition supports the comments on the draft CAP submitted by the CAP Coalition, including on Transportation.
 - **B. Transportation Mode Shift & No New Highways**
 - C. No New Highways policy, and removing planned but unbuilt highways including M-83, must be explicitly included in the CAP.
- III. Request to meet with C.E. Elrich, climate and MCDOT staff.
- **IV. References**
- V. Appendix Sustainable Transportation Vision for 2035 (Transportation Technical Working Group documents).

I. TAME Coalition requests full inclusion of entire set of Transportation Technical Work Group (TTWG) Recommendations

TAME Coalition Director Diane Cameron was a member of the Transportation Technical Workgroup (TTWG), and led the work of the Evaluation Sub-Group, in close coordination with the Transportation Demand Management Subgroup. A key deliverable from this team effort is the document entitled **Montgomery County Sustainable Transportation Demand Management Vision for 2035** (full document included in the appendix to these comments).

This Sustainable Transportation Demand Management Vision for 2035, should be used as a guiding Vision for Montgomery's Climate Action Plan. In particular, its **fundamental mode shift to people-centric and away from car-centric transportation**, and the necessity of supporting this mode shift through canceling planned but unbuilt highways, and of cancelling (and advocating to state and federal authorities) proposed highway expansion projects, must be explicitly incorporated into the CAP.

Below is an excerpt from this vision statement:

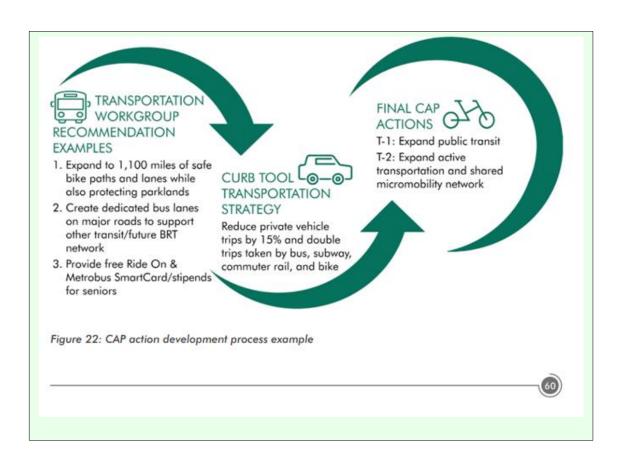
Montgomery County Transportation Technical Work Group
Transportation Demand Management Subgroup
Sustainable Transportation Demand Management Vision for 2035

"Infrastructure Transformation: Highway expansion projects have stopped and planned and proposed new highways have been cancelled. The resulting hundreds of millions of dollars saved were dedicated instead to extensive 'road diets' and complete street redesigns with priority for pedestrians, bicyclists, shared vehicles, and dedicated public transport lanes for bus rapid transit (BRT). This policy helps protect the county's landmark 93,000 acre Agricultural Reserve. (See Action Items 2.1.2; 3.2.2)." (emphasis added).

As an active participant and subgroup leader in the TTWG, the TAME Coalition is familiar with the deep expertise that community members brought to that table, and the excellent work products of each subgroup, centered in their recommendations.

As we reviewed the draft CAP and its transportation recommendations in comparison with output of the TTWG, we found that too much of the work of the TTWG has been omitted. The CAP "action development process example" on page 60 shows the key details of three of the original TTWG recommended actions, that were then reduced to generic statements in order to fit into the consultants' model. In the example below, Figure 22 on pg. 60 in the draft CAP, Element "T-1" entitled "Expand Public Transit" is an example of a generalized "lumped" strategy, where three specific transit actions recommended by the TTWG, were then lumped by the contractor into a strategy to reduce private vehicle trips by 15%, and then further translated into two broad-brush "Final CAP Actions."

The problem with this approach, is that it squanders the power of the original TTWG recommendations to guide fundamental change toward climate sanity in the transportation sector.



Although condensing and reducing recommended climate actions to moregeneric items may be useful for modeling purposes, when it comes to crafting an effective CAP, the strategies and actions must not be "lumped" - they must be dis-aggregated, and each must be described and "unpacked" into the specific original recommended actions.

The power and strength of the original TTWG recommendations is based on the fact that they are: (a) grounded in the wisdom of the civic activists and transportation and climate professionals who served on the TTWG; and (b) highly specific and well-defined action steps – not vague or generic policy.

TAME Coalition Request: Montgomery County's CAP must retain and work with the full set of specific expert recommendations of its work groups, including the Transportation Technical Work Group (TTWG).

II. Comments on the draft Climate Action Plan Transportation Section.

A. TAME Coalition supports the comments on the draft CAP submitted by the CAP Coalition. We wish to highlight the CAP Coalition comments on Equity and Justice, and on Transportation.

Regarding the role of Equity and Justice in the Climate Action Plan – as noted in the CAP Coalition comments, we applaud the strong element of Equity and Justice in this CAP. We note the especially strong and useful Equity elements of Action T-1 – "Expand Public Transit," which includes making transit farefree for low-income people, and designating bus-only lanes on major roads. We urge that the Equity and Justice elements be made central through weaving them into each CAP Action – in order to go beyond the secondary role of "co-benefits" which is how the draft CAP tends to treat this issue.

We request that Montgomery County government make funds available to leaders from groups representing low-income, Black, Latinx, and disability rights communities, to enable them to represent their communities on advisory committees. There are <u>twelve transportation advisory and action groups</u>, that advise <u>Montgomery County Department of Transportation</u>. There will likely be other advisory groups asked to help guide implementation of the CAP. Ensuring that the composition of each of these advisory groups is truly representative of our County's amazing diversity, requires that we

financially compensate under-resourced community leaders for their preparation and meeting time, to enable them to serve on these groups.

TAME Coalition Request: County must offer compensation to underresourced community leaders, for their meeting and preparation time, to enable them to serve on advisory committees.

We also repeat the point that Montgomery's CAP and General Plan Update, called THRIVE Montgomery 2050 – can and must be integrated. To this end, we incorporate by reference the <u>TAME Coalition testimony on draft THRIVE documents</u>, submitted in 2020. (Included in the appendix to these comments.) Recent research on the degree of integration of U.S. municipalities' Climate Action Plans with their cities' development planning and decisionmaking found an overall lack of adequate integration, even for municipal CAPs that did focus on climate adaptation and hazard planning. (Carter, 2019). The timing of the CAP and General Plan Update coinciding right now, gives all of us a once-in-a-lifetime opportunity to chart a new path of climate and ecological sanity and social, economic and racial justice.

Highways magnify climate hazards. They act as conduits for heat emergencies, and serve as funnels for flash floods. Adopting a No New Highways policy, and removing planned but unbuilt highways, are essential parts of Montgomery's CAP, both for GHG emissions reduction, and for climate adaptation and resilience improvement measures. This means that the transportation policies and actions in Montgomery's CAP must integrate planning decisions that a) stop building and expanding new highways, roads, and parking lots through de-funding highway projects, and through removing planned but unbuilt highways from master plans; and b) remove pavement and imperviousness wherever possible, and re-purpose existing pavement for people-centric transportation.

B. The Transportation Mode Shift to people-centric and away from carcentric modes, must be much greater than now reflected in the draft CAP.

Coupled with this major Transportation Mode Shift, is the related need to remove planned but unbuilt highways from the master plans.

B.1. Description of the Transportation Mode Shift to People-Centric Travel

The fundamental transportation mode shift, to people-centric modes of transportation, is crucial to whether Montgomery County will be able to achieve the Greenhouse Gas (GHG) reductions it committed to, in the 2017 Emergency Climate Resolution.

The current draft CAP document remains far too car-centric. The current draft CAP would continue Montgomery's heavy reliance on personal automotive travel, while switching to all-electric vehicles (a.k.a. "fuel-switching"). The draft CAP transportation section gives the lead role to continued car travel, in the unfounded belief that fuel-switching will get us most of the way to eliminating carbon emissions from the transportation sector. It casts transit and other people-centric modes as mere supporting actors. The current draft CAP does not embrace significant mode-shifting from car travel to transit, teleworking, walking, biking, and other people-centric modes.

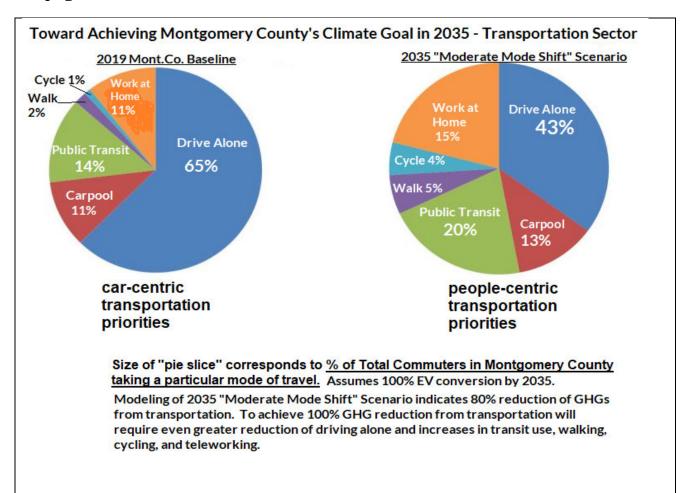
TAME Coalition Request: The CAP Transportation chapter must make reduction of Vehicle Miles Traveled ("VMT reduction") and promotion and support of people-centric modes of travel ("mode-shifting") the top strategy and priority.

To further underscore this imbalance and car-centric bias of the draft CAP, a councilmember recently observed that "90% of the emissions reductions in the draft CAP are due to fuel-switching." (Councilmember Hans Riemer 2/23/2021.) As noted in the CAP Coalition comments on transportation, this imbalance in favor of continued heavy reliance on the car, and only modest increases in people-centric modes, is unacceptable, if we are to meet our climate goals.

The Transportation Technical Work Group, Evaluation Sub-group worked closely with the Transportation Demand Management Sub-group to provide analysis of transportation mode share and Electric Vehicle Scenarios for 2035. (Appendix A.2.)

The pie charts below, from the TTWG TDM and Evaluation Sub-Groups, illustrate the transportation mode-shift that Montgomery County requires if it is to put its transportation sector on the path to eliminate GHG emissions by 2035. This Sustainable Transportation Vision for 2035 is sharply

contrasted with the mode share distribution presented in the draft CAP on pages 62 and 115.



Sources: Pie Chart on Left: Adriana Hochberg, *How are We Doing: A review of baseline data*. 2019 presentation; Slide #8 entitled *How We Travel to Work*. Pie Chart on Right: Moderate Scenario 2035 – from the <u>Transportation Technical Workgroup</u>, <u>Transportation Demand Management and Evaluation Subgroups</u>, Moderate People-Centric Travel Mode Assumptions, 2019.

These pie charts showing transportation mode distribution are based on work commute modes, while the mode shares in the draft CAP are based on overall travel by Montgomery County residents. Still, the magnitude of targeted mode shifts, so that people-centric transportation becomes the dominant approach, is what really matters here.

Simplifying assumptions reflected in this pie chart graphic include that the mode share distribution measured by Vehicle Miles Traveled is roughly equivalent to the mode share distribution reported in the 2019 baseline as percentage of total commuters taking a given mode. Since this graphic is showing a "Moderate Mode Shift" Scenario for 2035, even with conversion of all vehicles to "clean electricity," (all public transit and all private vehicles), this Moderate Mode Shift only gets us to an 80% GHG reduction – not the 100% reduction – the full elimination – of carbon emissions called for in the 2017 Emergency Climate Resolution.

What this analysis shows:

- Without a major mode shift away from car-centric, to peoplecentric travel for the majority of all trips, there's no way we can even get close to achieving our top climate goal of 100% carbon emissions reduction.
- The only way to get to this GHG elimination goal or to get close to it by 2035, is to initiate a massive shift to people-centric travel modes starting right now Spring 2021.

Example of a People-Centric Mode Shift: Portland Oregon's CAP

For a look at the transportation mode-share target in the CAP for another large urban county and city, the pie charts below depict the baseline mode share in 2012, and target mode share for 2030, for the City of Portland, Oregon (which overlaps with Multnomah County).

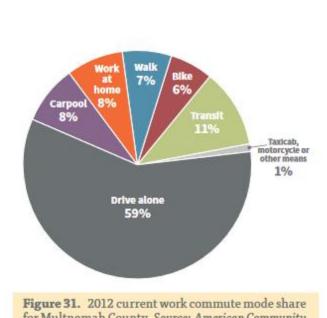
This transportation mode share distribution reflects the suitably-ambitious **2030 Objective 4** for the **Urban Form and Transportation** chapter of Multnomah County/Portland's Climate Action Plan for the year 2030: "Create vibrant neighborhoods where 80% of Portland and Multnomah County residents can easily walk or bicycle to meet all basic, daily non-work needs and have safe pedestrian or bicycle access to transit. Reduce daily per capita VMTs by 30% from 2008 levels." (page 78).

Portland's 2015 detailed CAP was written to implement Multnomah County's 2009 Climate goals: "Through the adoption of the 2009 Climate Action Plan, the City and County established a goal of reducing local carbon emissions 80 percent from 1990 levels by 2050, with an interim goal of 40 percent by 2030." (Multnomah County/Portland's Climate Action Plan for the year 2030 see pg. 7) These climate goals for GHG emission reductions are significantly more modest, and slower, than Montgomery's Emergency Climate Resolution goals of 80% GHG reduction by 2027 and 100% reduction by 2035. Yet, the travel mode shift targeted in Montgomery County's draft CAP Transportation chapter, is far less ambitious than the travel mode shift targeted by Portland and

Multnomah County. So Montgomery's CAP must be strengthened by a large travel mode shift to people-centric transportation, in order to put us in range of reaching our nationally-renowned Emergency Climate Goals for GHG reduction and elimination.

Portland Oregon/Multnomah County CAP - Work Commutes Travel Mode Shift: 59% drive alone in 2012 --> 20% drive alone by 2030.

In the future, significantly more people will need to travel to work and school by taking transit or biking



for Multnomah County. Source: American Community Survey

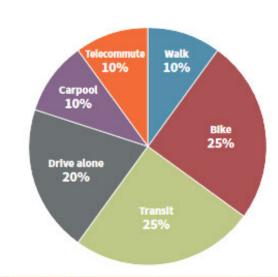


Figure 32. 2030 target work commute mode share for Multnomah County.

Portland/ Multnomah County OR - 2012 Baseline Work commute mode share

Portland/ Multnomah County OR - 2030 Target Work commute mode share

Source: Multnomah County (Portland) Oregon (2015) Climate Action Plan – Local Strategies to Address Climate Change. Figures 31 and 32, pg. 75.

(https://www.portland.gov/sites/default/files/2019-07/cap-2015_june30-2015_web_0.pdf p.75)

In contrast to the Portland/Multnomah County CAP, Montgomery County's targeted decline in driving alone in the draft CAP is not nearly ambitious enough. The draft CAP's targeted decline in driving alone – from 75% of all trips taken in solo-driver cars as of 2018, to 60% solo car trips targeted for 2035, means that the majority of all trips in 2035 will still be solo car trips according to this plan. This targeted mode shift in the draft CAP isn't nearly ambitious enough to meet our climate commitments including GHG elimination plus adaptation and hazard reduction. This equates to only a 20% reduction in VMTs from solo car trips, compared with the 33% reduction in VMTs from solo car trips from the TTWG Sustainable Transportation Vision for 2035 (TDM Subgroup) in its "Moderate Sustainable Transportation" scenario modeled by the Evaluation Subgroup (65% of VMTs from driving alone in 2019, dropping to a targeted 43% of VMTs from driving alone in 2035). This "Moderate" scenario is predicted to achieve an 80% GHG reduction in 2035.

As noted in the report Driving Down Emissions (Smart Growth America and Transportation for America, 2020), "Simply put, we'll never achieve ambitious climate targets or create more livable and equitable communities if we don't find ways to allow people to get around outside of a car."

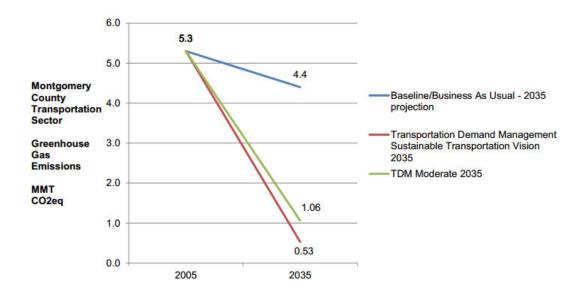
The TTWG's Moderate scenario targeting a 33% reduction in VMTs from solo car trips for 2035, is comparable to the Objective listed in the Portland, Oregon CAP as: "2030 Objective 4": "Reduce daily per capita Vehicle Miles Traveled by 30% from 2008 levels."

TAME Coalition Request: That Montgomery County adopt a target goal of at least a 33% reduction in VMTs from solo car trips (using a 2019 baseline). This is predicted to enable an 80% GHG reduction.

By adopting this more-ambitious VMT reduction target of at least 33% reduction in VMTs from solo car trips by 2035, Montgomery County will be in range of achieving an 80% reduction in GHGs. Even greater and faster VMT reductions are required to achieve the 100% GHG elimination called for in the 2017 Emergency Climate Resolution. This major shift to people-centric

transportation will enable Montgomery County to serve as the climate leader in the East, similar to Portland's role on the West Coast.

The graph below illustrates the modeled GHG emission reductions for three scenarios examined by the Evaluation and Transportation Demand Management subgroups of the TTWG: Business As Usual; TDM Moderate Scenario; and a more-ambitious Sustainable Transportation Demand Management Vision Scenario.



This chart shows that the TDM Sustainable Transportation Vision for 2035 gets us to 90% GHG reduction by 2035; and the "TDM Moderate" Scenario gets us to 80% GHG reduction by 2035. In sharp contrast, the Baseline/Business as Usual (BAU) Scenario only gets us to a 17% reduction in GHG emissions by 2035. The BAU Scenario uses data from the metro Washington, D.C. Transportation Planning Board (Transportation Technical Work Group, 2019 – Evaluation subgroup presentation and spreadsheet analysis.)

B.2. Why Fuel-Switching to EVs Isn't Enough: Mode-Shifting is Key

In Montgomery's draft CAP, fully 9 out of 13 total Transportation actions are related to fuel-switching to all-electric vehicles. While fuel-switching to clean renewable electricity to power motor vehicles is a key GHG reduction strategy, it must be a secondary approach used in tandem with mode-shifting. Mode-shifting so that walking, cycling, teleworking and transit together account for the majority of trips, and so that overall Vehicle Miles Traveled are reduced, must be the top transportation priority for the CAP.

TAME Coalition Request: The CAP Transportation chapter must make EV conversion a secondary strategy, not the main strategy, for meeting GHG elimination and other climate goals. The main strategy must be reducing VMTs and mode-shifting to people-centric travel.

The non-profit advocacy group, Transportation for America, has described why electric vehicles (EVs) are not enough & why we must reduce VMTs in order to meet our climate commitments. Stating, "We can't meet our climate goals based on EVs and efficiency alone," the group reported on lessons learned in Minnesota, California, and Hawaii from climate-transportation planning efforts, that reducing VMTs is essential, and must be a prime focus of local CAPs in addition to EV adoption. The list below is based on the fact sheet entitled "CLIMATE: Fuel efficient and electric cars will never be enough"

CLIMATE: Nine Reasons Why VMTs must be reduced:

Fuel efficient and electric cars will never be enough.

- 1) Adoption of electric vehicles does nothing to improve congestion.
- 2) Vehicle emissions are the result of a combination of three things: (1) fuel efficiency, (2) the carbon content of fuel, and (3) the distance people travel (vehicle miles traveled, or VMT). Gains in the first two areas can be negated by losses in the third increase in VMT can result in increased GHG emissions.
- 3) Between 1990-2016, a 50 percent increase in driving negated a 35 percent increase in overall fleet fuel efficiency via implementation of CAFE standards. This caused emissions to rise by 21 percent over the same time period.
- 4) Improvements in vehicle efficiency and electrification are undermined by construction of new highways, roads, and lanes.
- 5) New highways, roads and lanes induce more driving. They increase VMT.
- 6) Increased VMT leads to more emissions and ultimately more congestion. This syndrome is called "induced demand," also described as "If you build it, they will come."
- 7) Without reform, even as vehicles become cleaner, highway projects and carcentric investments will continue to promote driving as the only safe and convenient option.
- 8) Without reform, people driving electric or more efficient vehicles will continue to face congestion and live in places where walking to work, the park, or other essential services is dangerous or unpleasant.
- 9) Nearly half of all car trips are three miles or less, trips that could easily be made by walking, biking, or transit if land use and transportation decisions were coordinated to make people-centric travel the prime focus.

List Based on this Source: <u>Transportation For America: CLIMATE: Fuel Efficient</u> and <u>Electric Cars Will Never Be Enough.</u>

Reducing VMTs is achieved through policies, funding strategies, code changes, and master plan changes that make people-centric travel the priority and that cancel, and remove from the master plans, planned but unbuilt highway and road projects. **Fuel efficient and electric cars will never be enough to achieve our climate goals.**

B.3. Land Use Planning and People-Centric Transportation Strategies Are Essential. In order to chart a transportation future for Montgomery County that is people-centric and avoids GHG emissions, many more strategies and actions are required. In contrast to the 13 strategies and actions listed in Montgomery County's draft CAP, the Portland Oregon CAP lists 33 actions in its chapter that combines Transportation and Land Use Planning, titled "Urban Form and Transportation." (pg. 70).

In Portland's CAP for the "Urban Form and Transportation" chapter, the first three actions are transportation funding changes based on increasing funding to transit, walking and cycling, and replacing the gas tax with a 'road useage and fuel efficiency charge." Another pair of strategies for Portland's mode shift and GHG reduction, will work on the Regional Transportation Plan (of the regional planning agency) to align mode share targets with carbon emission reduction targets.

Although Montgomery County's land use planning authority rests with the Council and Planning Commission, not the Executive Branch, the fact is that the CAP must connect with, and integrate, land use planning requirements needed to achieve our climate goals. We recognize that achieving this CAP-land use planning policy integration, will require new levels of intergovernmental cooperation and coordination for our County.

B.4. Inter-dependence of the Transportation Mode Shift & "No New Highways" - These two fundamental policies requested by the TAME Coalition, the CAP Coalition, and other coalitions and groups: the Mode Shift to people-centric transportation modes, and the No New Highways policy, are inter-related and inter-dependent. This means that in order to achieve our climate goals centered on GHG elimination by 2035, it's crucial that we significantly reduce VMTs and shift to using people-centric travel modes for the majority of trips in Montgomery County; this mode-shift must be coupled with adopting a No New Highways policy, and removing planned but unbuilt highways from master plans. This set of actions is essential to achieving our climate goals by 2035.

C. A "No New Highways" policy, and removing planned but unbuilt highways including M-83, must be explicitly included in the CAP.

Adoption of this No New Highways policy must be coupled with the specific climate and equity action of removing planned but unbuilt highways from the County's master plans, starting with removal of proposed M-83 Highway (Midcounty Highway Extended).

M-83, also called Mid-County Highway Extended, is a proposed highway in Germantown, Gaithersburg and Montgomery Village. A relic of the 1950s and '60s "car culture," M-83 is based on the false belief that building more highways and roads solves congestion. If built, the construction of M-83 (Alternative 9A) 4-to-6 lane, 5.7 mile divided highway would damage or destroy over 100 acres of the Climate Resilience Forest of the Upcounty, including over 70 acres of interior forest in North Germantown Greenway Stream Valley Park.

Current status of proposed M-83: Although a 2018 County Council resolution (Resolution 18-957) prohibited reliance upon M-83 for transportation elements of future master plans, the same resolution left M-83 highway in five existing local master plans, plus the Master Plan of Highways and Transitways.

Other planned but unbuilt highways include Montrose Parkway East, and Observation Drive Extended. Governor Hogan's push for highway expansion of I-270 and I-495 must also be cancelled, and the monies devoted to transit and other people-centric projects, if we are to have a chance of meeting our transportation climate goals. Montgomery County officials must use all the tools at their disposal to remove and cancel all of these highway projects.

Montrose Parkway East would be a 1.6-mile divided parkway in Rockville that would take out parkland, wood and wetlands in Rock Creek watershed, extending from Rockville Pike to Veirs Mill Road. The previous Council and Executive did not want to spend any more money to move the project forward (pricetag estimated at \$146 million), but, did not want it removed from the Transportation Master Plan either. The narrow linear corridor is almost entirely forested, and according to a local ecologist would make a great urban greenway park. (Montgomery County OMB, 2018; Parrish, 2020 comments on the Thrive Plan).

<u>Observation Drive Extended</u> is another planned but unbuilt highway. It would be a 2.2 mile long roadway in Clarksburg, within a minimum 150-foot right-of-way that would remove and damage wetlands and forested floodplains in the Little Seneca Creek watershed. Its estimated price tag would be over \$116 million. (Montgomery County OMB, 2020)

As long as any planned highway or road including proposed M-83 is in a master plan, it can be revived and built at any time. In order to put Montgomery County on a clear path to eliminating all greenhouse gases by 2035, including from transportation, it's essential that we remove these obsolete dinosaur highway projects from *all* of our master plans.

A No New Highways policy is widely supported in Montgomery's climate and transit communities, including by the CAP Coalition in its comments on the draft CAP submitted on 2/28/2021. It was also recommended by the TTWG, Transportation Demand Management and Evaluation subgroups – and by the Montgomery County Planning Department and Board for THRIVE Montgomery 2050.

As quoted above, the TTWG Sustainable Transportation Demand Management Vision for 2035 included this element:

"Highway expansion projects have stopped and planned and proposed new highways have been cancelled." (Montgomery County Sustainable Transportation Demand Management Vision for 2035).

TAME Coalition Request: that Montgomery County's CAP Transportation chapter include an explicit policy for No New Highways and No Highway Expansions, and that it also include the tandem Action of removal of planned but unbuilt highways and proposed highway expansions from master plans and funding priorities.

The TTWG Transportation Demand Management subgroup recommended two specific actions that directly relate to our request for a No New Highways Policy and Actions to be included in the CAP. The TDM subgroup called for a moratorium on County spending on car-centric infrastructure building, until such time as a methodology for accounting of the "social cost of carbon" is produced. The TDM subgroup also called for County action to stop the expansion of I-270 and I-495 that is led by Governor Hogan.

Removal of planned but unbuilt highway projects from the master plans, starting with removal of M-83, along with removal of Montrose Parkway East and Observation Drive Extended, is necessary in order to put us on the clear path forward to meeting our climate goals including GHG elimination by 2035.

This removal of planned but unbuilt highways from the master plans was also included for consideration in the <u>October 2020 public hearing draft of THRIVE Montgomery 2050</u>, and is strongly supported by TAME Coalition and others. (Thrive excerpts are provided below.)

Excerpts: THRIVE Montgomery 2050, October 2020 Public Hearing Draft

Goal 4.1: Get people out of their cars and transform Montgomery County into a community of walkable, people-centric places. Make public transit, walking, and bicycling the preferred travel mode for daily trips and substantially reduce the need for personal vehicles.

Action 4.1.1.b: Update the Master Plan of Highways and Transitways to consider whether to remove master-planned but unbuilt highways and road widenings.

Attaining integration of Montgomery's CAP with its land use planning policy as set forth in our General Plan and its Updates, and in our master plans, will require new levels of inter-governmental cooperation and coordination for our County. The County Executive, County Councilmembers, and Planning Board Chair and Commissioners, must all work closely together and must fully involve citizen groups, County residents in charting this course and making the real-world changes that our County and Planet require.

SEVEN REASONS WHY MONTGOMERY COUNTY MUST ADOPT A NO NEW HIGHWAYS POLICY

- 1) CLIMATE: Building and expanding highways increases carbon emissions.
- 2) HEALTH: A review of 700 scientific reports found traffic pollution causes asthma attacks in children and may cause a wide range of other health damages, including impaired lung function and premature death from cardiovascular diseases.
- 3) SAFETY: In 2020, there were 18 pedestrian and cyclist deaths on roadways in Montgomery County (Council Press Release, 2021). As long as we keep planning and building new highways, we won't meet Vision Zero.
- 4) EQUITY: People of color, immigrant, and low-income communities are more likely to be exposed to health damage from highway pollution and to the dangers of walking near high-speed highways, but they are least likely to own cars so they benefit far less from new highways.
- 5) TRANSIT: Transit funding has declined with ridership during the pandemic, but we need it now and we'll need it even more when more people start commuting again; we need to support increased funding for Ride-On Bus improvements and Fare-Free service, Bus Rapid Transit, and other people-centric modes not new highway projects.
- 6) WATER: Highways and other "car infrastructure" are the biggest source of Montgomery's stream pollution; heavy storms funneled by highways scour streams and pollute drinking water supplies.
- 7) CLARITY: Leaving planned highways in the master plans creates confusion about our transportation policy direction; it hinders full-speed-ahead funding and staff work on transit projects.

D. Approach to removing planned but unbuilt highways from Master Plans

The approach to removing planned but unbuilt highways from Master Plans requires deleting the planned highways from all local Master Plans in which they appear, and also from the Master Plan of Highways and Transitways.

TAME Coalition Request: that all planned but unbuilt highways be removed from all County master plans in which they appear, with M-83/Midcounty Highway Extended to be the first such planned but unbuilt highway to be removed from all the master plans. We further request that County officials undertake this climate and justice action immediately in 2021.

Using the M-83 removal as the first highway removal climate action, County officials must then proceed to remove the other planned but unbuilt highway projects from the master plans. Achieving this unprecedented, crucial removal of obsolete dinosaur highway projects, requires a major collaborative effort between the Executive, the Council, and the Planning Board. We demand nothing less from our County. As citizens we are ready to roll up our sleeves and contribute to this task.

Conclusions

The draft CAP Transportation chapter must include all of the Transportation Technical Work Group (TTWG) recommended policies and actions; too many of the specific actions recommended by the TTWG were dropped or condensed into generic proposals. In order to include full representation of low-income communities, communities of color, and people with disabilities, it's essential that Montgomery County make funds available to compensate under-resourced community leaders for their time in serving on County Climate and Transportation advisory committees.

With respect to the Emergency Climate Resolution's commitment to 80% reduction in GHGs by 2027, and a 100% reduction by 2035, the draft CAP Transportation chapter is far from the mark. It puts most of

its eggs in the "Electric Vehicle conversion" basket – while down-playing the role of travel mode shifting to people-centric travel.

Without a major travel mode shift, that's much greater than the 20% reduction in VMTs from solo driving in the draft CAP, there's no way we can even get close to our climate goals for GHG reduction and elimination.

Learning from the experience of cities and counties that are ahead of us in climate planning and transitioning to people-centric transportation – including Portland Oregon/Multnomah County – means that we start by setting targets that are ambitious enough to drive the changes that we require. Modeling performed for the Transportation Demand Management subgroup of Montgomery County's Transportation Technical Work Group indicates that even with full vehicle conversion to EVs, a reduction of solo driving trips of at least 33% is required to attain an 80% reduction in Greenhouse Gas emissions.

Adoption of a No New Highways policy in our Climate and General Plans, and immediately implementing it via removal of planned but unbuilt highway projects from the master plans, starting with removal of proposed M-83 Highway, is essential to a livable future here in Montgomery County for all residents and to put us on the clear path forward to meeting our climate goals including GHG elimination by 2035. Removal of planned but unbuilt highways must start with removal of M-83 Highway, along with removal of Montrose Parkway East and Observation Drive Extended. Achieving these highway removals from master plans, and blocking any highway expansions planned by state authorities, is essential to setting a clear course for people-centric travel, along with community, parkland, forest and wetland protection, in order to attain our climate and equity goals.

Undertaking this task will require a high level of intergovernmental cooperation on the part of County officials including the Executive, Council, and Planning Commission, in partnership with citizen climate, transit, and other groups. **We must act immediately, in Spring 2021**, to use the opportunity presented by the CAP along with Thrive Montgomery 2050 – to achieve these changes including removal of the dinosaurs - the planned but unbuilt highway projects - from the master plans.

III. Request to meet with C.E. Elrich, climate and MCDOT staff

Montgomery County officials and residents must now work together to accept and embrace the challenge of economic and cultural changes required in changing from a car-centric to a people-centric transportation system – in conjunction with other systemic changes required to meet our climate, justice and equity goals. Embracing this challenge requires that we shift transportation finances away from new road and highway construction, in order to make adequate funds available for two essential needs: a) maintenance of existing roads; and b) building and maintaining transit, pedestrian and bicycle infrastructure.

In further follow-up work for this needed policy shift, TAME Coalition asks to meet with County Executive Elrich and staff on the climate team and in MCDOT, to plan next steps in establishing the No New Highways policy in the CAP, and charting the path forward in implementing this policy starting with removal of M-83 highway from the County's master plans.

We appreciate the opportunity to provide these comments, and we look forward to working with County staff and colleagues to achieve our climate, justice and equity goals in the transportation realm.

Diane M. Cameron

Diane M. Cameron

Director

TAME Coalition

Margaret Schoap Organizer

TAME Coalition



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IV. References

CAP Coalition (2021) <u>Comments submitted on 2/28/2021 on the draft</u> Montgomery County Climate Action Plan.

Carter, E. (2019) A Snapshot of Climate Change Adaptation Efforts in American Urban Planning & Development Master's Thesis, Lund University, Sweden. https://tinyurl.com/ECarterClimate

Montgomery County MD Climate Action Plan – public review draft issued December, 2020.

https://www.montgomerycountymd.gov/green/Resources/Files/climate/draft-climate-action-plan.pdf

Montgomery County MD Council – Press Release on sidewalk safety, February 22, 2021.

https://www2.montgomerycountymd.gov/mcgportalapps/Press_Detail.aspx ?Item_ID=33780&Dept=1

Montgomery County MD Planning Department, 2020. THRIVE Montgomery 2050 – October 2020 Public Hearing Draft.

https://montgomeryplanning.org/wp-content/uploads/2020/10/Public-Hearing-Draft-Plan-Thrive-Montgomery-2050-final-10-5.pdf

Montgomery County MD Transportation Technical Work Group, Transportation Demand Management Subgroup, <u>Sustainable Transportation</u> <u>Demand Management Vision for 2035</u>.

Montgomery County OMB (2018) Montrose Parkway East budget document. https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/pdfs/f https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/Pots/f https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/Pots/f https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/Pots/f http

Montgomery County OMB (2020) Observation Drive Extended budget document.

https://www.montgomerycountymd.gov/OMB/Resources/Files/omb/pdfs/fy22/ciprec/P501507.pdf

Multnomah County (Portland) Oregon (2015) *Climate Action Plan – Local Strategies to Address Climate Change.*

https://www.portland.gov/sites/default/files/2019-07/cap-2015_june30-2015_web_0.pdf

Parrish, John (2020) Comments submitted to Montgomery County Planning Board on draft THRIVE Montgomery 2050 General Plan Update.

Smart Growth America and Transportation for America Report (2020) <u>Driving Down Emissions</u>: Transportation, Land Use, and Climate Change.

TAME Coalition (2020) Testimony submissions on THRIVE Montgomery 2050, submitted to Planning Board in April, June, August, and November 2020. https://tinyurl.com/TAMEcmtsTHRIVE

<u>Transportation for America</u> Fact Sheet_(2020) CLIMATE: Fuel efficient and electric cars will never be enough. https://tinyurl.com/T4AmEVsNotEnough

Transportation Technical Work Group, Evaluation Subgroup, presentation of December 2019.

https://www.montgomerycountymd.gov/green/Resources/Files/climate/workgroup-recommendations/evaluation-sub-group-presentation-to-transportation-workgroup.pdf

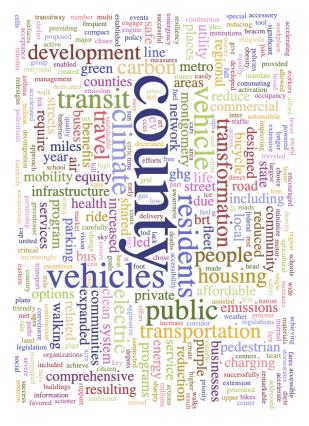
Transportation Technical Work Group, Evaluation Subgroup spreadsheet analysis of transportation mode share scenarios + EV conversion for GHG emissions (2019)

https://www.montgomerycountymd.gov/green/Resources/Files/climate/workgroup-recommendations/tdm-simplified-eval.xlsx

V. appendix materials

- A. Transportation Technical Work Group, Transportation Demand Management and Evaluation Subgroups, 2019.
 - 1. Montgomery County Sustainable Transportation Vision for 2035
 - 2. Evaluation Subgroup presentation related to the Sustainable Transportation Vision for 2035

Montgomery County Sustainable Transportation Demand Management (TDM) Vision for 2035



It is January 1, 2035 and Montgomery County successfully achieved its ambitious goal of eliminating essentially all transportation related greenhouse gas (GHG) emissions generated from within the county.

The county's transportation emission reduction strategy had three key goals:

- 1) reduce single occupancy vehicle driving,
- 2) accelerate use of low emission vehicles, and
- 3) require climate-friendly development patterns.

This approach had two significant advantages over less comprehensive approaches. First, by adopting a mutually reinforcing portfolio of measures, the county minimized the risk of relying on any single approach, given the uncertainties surrounding costs, technologies, and market acceptance. Second, it enhanced quality of life by

improving equity, health, safety, climate resiliency, and community cohesion among other benefits.

Residents, workers, and visitors of all ages, incomes and physical capabilities, whether in town or upper county, enjoy a wide variety of accessible and carbon free mobility opportunities. The county has embraced the circular economy and incentivized the creation of green industries throughout the region and in the context of transit oriented development (TOD).

Many more residents and workers are now living and working in compact, walkable, vibrant green communities, increasingly in mixed-use higher density development or accessory dwelling units.

These communities allow residents easy local and regional accessibility whether by foot, bicycle, scooter, wheelchair or public transit. Accelerated construction of a comprehensive bicycle and pedestrian network, as envisioned in the Bicycle and Pedestrian master plans provide well over 1100 miles of safe, convenient, and often separated bicycle paths and pedestrian rights of ways. These pathways were carefully designed and maintained to help minimize the mobility difficulties resulting from increasingly severe weather.

Increased accessibility, including greater mobility choices along with carefully designed parking, road, and decongestion tax incentives and penalties, has led to significant decreases in the number of private vehicles, and the miles driven in these vehicles.

The county's comprehensive approach resulted in a "tipping point", in which only a smaller percentage of trips by county residents are now made using single occupancy vehicles (SOV) as an option of last resort. The remaining vehicles - private cars and sport utility vehicles, fleet, delivery, service, commuter and paratransit vans, trucks and buses - are now almost entirely powered by clean electricity, whether through batteries or fuel cells.

This reduction in private vehicles and their use has allowed the transformation of many public and private parking facilities (including large shopping malls) into mixed-use compact development featuring market and affordable housing, commercial and public uses, and generous green spaces.

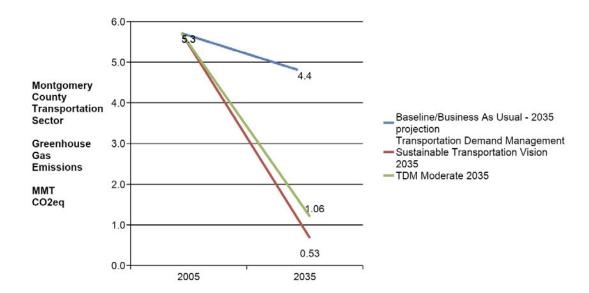
Transportation diversification and land use transformation resulted from a series of carefully designed public policies developed as part of the intensive public climate emergency planning process during 2019 and 2020.

This unprecedented public involvement effort engaged thousands of county residents from all areas and walks of life resulting in policy, investment and practice recommendations that took into account equity, inter-generational participation, and community transparency and sought to create healthy, resilient, and sustainable 'people-centric' communities as indicated by the 10 characteristics cited below:

- 1. More pedestrians as streets became welcoming places engage in community life
- 2. More people cycling and using public transport with policies that decreased car use and increased street safety
- 3. Better air quality that delivered health benefits and reduced health inequalities
- 4. More resident comfort given increased and safe walking and cycling options
- 5. Less noise from motor traffic directly benefited health and encouraged active travel
- 6. Better-designed crosswalks made streets easier to navigate and connected communities
- 7. More resting places encouraged mobility for certain residents and even benefited local businesses given the increased foot traffic
- 8. More sidewalk shade and shelter access points enabling everyone to use our streets, whatever the weather.
- 9. More relaxed communities as streets were buffered with green infrastructure, such as street trees and rain gardens
- 10. More connected communities as people became accustomed to interesting and stimulating pedestrian journeys with attractive buildings, plantings, and street art

GHG Emission Reduction Potential

Based on an <u>initial data analysis</u> conducted by the *Metrics & Data Evaluation* sub-group of the Transportation Technical Working Group, the potential GHG emission impact of the TDM Vision for 2035 results in a reduction of between 80-90% over 2005 levels.



One of the primary reasons for this drastic GHG reduction is because this TDM Vision focuses on the *movement of people from one destination to the next, and not the movement of cars*. By focusing on game-changing public transit, electric vehicle, infrastructure transformation, organizational and system change, public awareness, and affordable housing policies, the county incentivized a transportation modal mix that made a substantial GHG emission impact.

Each section forthwith provides more detailed concepts, which link to at least one of the 40 associated "action items" or projects within a <u>TDM spreadsheet</u> that provides peer best practices examples, implementation steps, data analysis available / needed, co-benefits, and suggested priority.

Public Transit

Invigorating public transport was priority one - for without an expanded, efficient, and equitable system the other key zero carbon actions could not easily occur. (See Action Item 3.2.1)

More people now patronize Ride On buses due largely to reorganized and expanded bus routes, more frequent service system-wide, and fare reductions including many free fares. In addition, a newly established fleet of small mostly autonomous and shared shuttles facilitate commuters/riders the last mile between the Metro or Purple Line and their

home, workplace or other destination. Ride On has grown from the 33rd to the 25th largest system in the US. with an expanded all electric fleet of right-sized buses serving every part of the county including service to Prince George and Howard Counties. (See Action Items 1.1.1; 1.1.2; 1.2.2)

The upper county Corridor Cities Transitway opened in the early 2020s and the 10 dedicated BRT lines were all in service by 2028. (See Action Items 1.1.6; 2.1.4)

Strikingly designed climate proof storage areas for bicycles and scooters, as well as sturdy and secure pedestrian waiting areas - all information and amenity rich - are features of every Metro, Purple Line, Corridor Cities Transitway, Ride On and BRT stops. (See Action Items 1.1.7; 2.1.6; 2.2.1)

School bus fleet size and mileage traveled were sharply reduced - as were student obesity rates - due to higher density development, a more extensive sidewalk network, roundabouts, safer roads, and a school siting and design policy that favored multistory buildings in developed areas connected to transit and services. (See Action Items 2.1.5; 5.1.6)

Electric Vehicles (EV)

Accelerating the retirement of internal combustion engine (ICE) vehicles, incentives for the purchase of electric vehicles, maximizing the shared use of electric vehicles, and convenient, clean energy infrastructure were the actions necessary to achieve near zero carbon emissions in our vehicles. (See Action Item 5.1.3)

The County in partnership with other jurisdictions and organizations successfully lobbied the state of Maryland and the US Congress to develop aggressive ICE (internal combustion engine) buyback programs. Those programs combined with higher taxes imposed on ICE vehicles were successful in helping to retire the 800,000 or so vehicles registered in the county, though at a very high cost. Special incentives were provided to car dealers to give priority to electric vehicle sales. (See Action Item 3.1.5)

To maximize resiliency and minimize dependence upon a grid powered in part by fossil fuels, Montgomery County created a network of solar microgrid-ready depots to charge its electric fleet. These depots were open to county residents when not in use. (See Action Item 2.2.1)

In cooperation with utilities and the private sector, the county created the largest charging network in the region. In developed areas of the county no vehicle is more than a few minutes away from a charger. Wireless charging is widespread as are charging systems embedded in roads. (See Action Item 3.1.2)

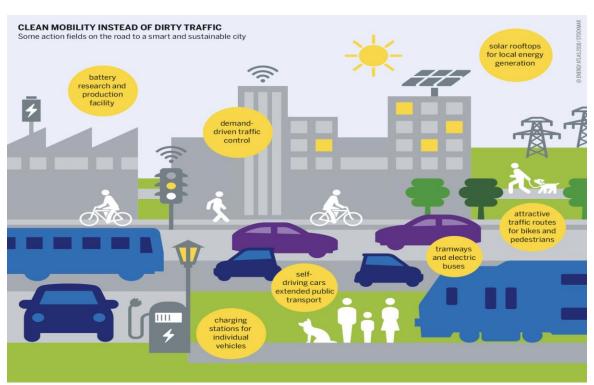
New construction and major retrofits now require EV charging infrastructure while direct energy from vehicle batteries to the grid is a critical tool for effective grid management.

Vehicle sharing was supported by a county sponsored electric vehicle co-op. Commercial taxis and ride hailing services

were required to use electric vehicles and to give deeper discounts to individuals choosing shared vehicle options. Shared autonomous vans are moving millions of people a year by providing last mile services from Metro, the Purple Line, and many BRT and other bus routes. (See Action Item 3.1.4)

A successful campaign recruited local businesses to join the county in requiring that all commercial deliveries be made in Clean Emission Vehicles (CVO) only. As a result, UPS, FedEx, Amazon and other delivery companies accelerated the transformation of their delivery fleet, including using e-cargo bikes, across the nation. (See Action Item 3.1.3; 5.1.1)

These and other accomplishments led the county to be recognized as among the most EV-friendly counties in the nation. Only a number of counties in California - which had a multi year head start - has had more EV success.



Infrastructure Transformation

Highway expansion projects have stopped and planned and proposed new highways have been cancelled. The resulting hundreds of millions of dollars saved were dedicated instead to extensive 'road diets' and complete street redesigns with priority for pedestrians, bicyclists, shared vehicles, and dedicated public transport lanes for bus rapid transit (BRT). This policy helps protect the county's landmark 93,000 acre Agricultural Reserve. (See Action Items 2.1.2; 3.2.2)

Street redesigns reduced automobile access and automobile use, which - complemented by vigorous enforcement, public education, and decongestion pricing led to a sharp and sustained reduction in vehicle-related injuries and deaths, fulfilling the promise of the county's commitment to Vision Zero more than two decades earlier. (See Action Items 3.1.1; 3.1.2)

Telecommuting has vastly expanded, both to reduce GHG emissions and to ensure continuity on the increasingly frequent days when severe weather made commuting much more hazardous, if not impossible. (See Action Item 4.2.3)

Regulations now require all new multi-family housing and commercial development to limit parking spaces, reduce miles traveled in vehicles, and lessen GHG emissions by their occupants through sharply restricted or market-priced parking as well as subsidized bicycling, pedestrian and transit infrastructure. (See Action Items 2.2.2; 2,2,3; 2.2.4; 4.2.4; 5.1.5)

Roads have been rebuilt to accommodate the increased climate stresses of heat and intense rainfall. Lighter colored surfaces reflect sunlight and minimize heat buildup. The successful use of innovative low carbon paving materials for street construction and repair led to the adoption of these materials by governments throughout the country, preventing many million tons of CO2 from being released into the atmosphere. (See Action Item 3.1.2)

The impact on transportation related GHGs that are generated outside the county has also been addressed including delivery curb control and curb pricing plans to increase efficiencies in public spaces. Business and

personal air travel has been sharply reduced due to the success of a Stay Local program that educated residents and businesses on the 'sky high' carbon emissions resulting from air travel. Concomitantly longer distance bus and train travel originating in the metro area greatly increased. (See Action Items 1.1.5; 3.1.3; 6.1.2)

Organizational & System Changes

This comprehensive transformation of how county residents travel could only be accomplished by systematic and aggressive efforts to educate and support the public, monitor, evaluate and quickly modify programs when necessary, and ensure that all current and proposed county regulations, budgets, investments and plans were consistent and supportive of the county's climate goals - an effort known as the climate test.

An equally important principle and program established early on by the county was known as the 'equity test'. Every major climate effort was designed with equity in mind - to ensure that no group be disadvantaged and that those less advantaged would be given full opportunity to participate. (See Action Item 5.1.7)

Even with aggressive programs, revamped traffic management and outreach initiatives the county recognized that achieving its targets would require comprehensive and substantial financial and programmatic support and partnership with state and federal agencies. (See Action Item 2.1.1)

To garner this essential support the county organized a broad coalition of cities and counties across the country to successfully lobby for changes in state and federal legislation and utility regulations. Legislation included:

- 2020 100% Eastern Regional (and 2025 Federal) Clean Energy Only (CEO) Electric Power Mandate
- 2022 75% Eastern Regional Transportation CEO Mandate Cap & Invest Program (Increased to 100% in 2027)
- Clean Energy Utility Selection (Community Choice Energy)
- Statewide Utility Bill surcharges which provided universal electric vehicle infrastructure
- Progressive, escalating carbon tax revenue. (See Action Item 6.1.1)

Public Awareness

Resident and employee awareness campaigns included labeling gas pumps with GHG information, incorporating climate emergency messaging at public events, and showcasing climate messages at every bus station, on every Ride On bus, and within every transit and ITS app among the dozens of other climate emergency awareness efforts undertaken by the county and its partners. These efforts were also spearheaded by various organizations including public institutions, schools, anchor employers,

religious, labor and other civic institutions. (See Action Items 5.1.8; 5.1.9))

Following IDEA (inclusion, diversity, equity and accessibility) principles and in partnership with businesses, non-profits, schools, civic and religious organizations, the county established a Community Climate Extension Service (CCES). (See Action Items 5.1.2; 5.1.4)

Modeled on the 100 + year old agricultural extension program, hundreds of volunteers were trained to help residents and businesses understand and access the many programs and services available to transform their homes, businesses, and lifestyles. Well over half of the county's households and businesses were assisted through the first fifteen years of the program. Inspired by Montgomery's example, millions nationwide have now been assisted by the national CCES network.

Affordable Housing

Transportation, climate change and housing were found to be intricately linked and inseparable topics. As a result, sufficient affordable housing was located adjacent to employment centers in order to cut down on commuting times and reduce vehicle miles traveled (VMT) as well as GHGs. In addition, an emphasis was placed on creating more regional employment and activity centers in upper county. (See Action Items 1.1.3; 4.1.1; 4.1.3; 4.2.1; 4.2.2)

The Many Benefits of This Sustainable Vision for a GHG Free County

This unprecedented zero carbon transformation not only met the county's greenhouse gas reduction goals, it also helped achieve the following *Quality of Life* benefits, including:

- **Resiliency**: Addressing transportation issues of <u>social vulnerability</u> increased the capacity of county communities to respond to events associated with climate change.
- **Decreased Congestion & Travel Time**: Residents live closer to their workplace, have more choice of travel options and contend with fewer vehicles on the road.
- Community: Increased transit equity, increased affordable housing, recreation and park space as a result of converting parking lots, and increases in transit and walking social interactions.
- **Safety**: Decreased vehicle-related deaths
- **Health:** Less asthma and obesity and reduced numbers of heart attacks, strokes and general ill health
- **Stormwater Management**: Increases in more permeable surfaces led to less stormwater runoff, less water pollution and less storm flooding

This remarkable transportation transformation was matched by an equally ambitious and integrated transformation of the county's building, waste, agriculture, manufacturing, and retail sectors as well as other emitters of GHGs towards zero carbon. Our accomplishment is a beacon to communities in every state and even on many continents. To commemorate Montgomery County's remarkable achievement the President of the United States rode up 16th St. from the White House on 'United States Bicycle One' (The Secret Service vetoed her wish to ride on United States Scooter One') to the Silver Spring Civic Center to present a special award to the 1,200,000 residents of the county for being the largest jurisdiction in the world to eliminate its greenhouse gases to help restore a safe climate for future generations.

MONTGOMERY COUNTY, MARYLAND TRANSPORTATION TECHNICAL WORKING GROUP FOR CLIMATE ACTION PLANNING

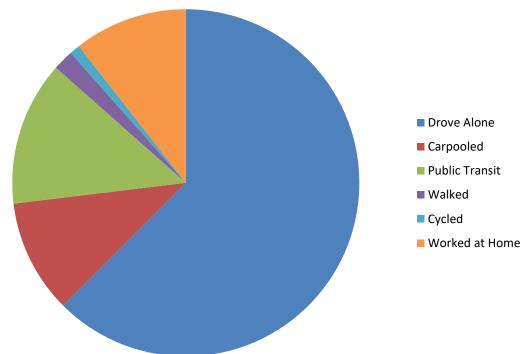
Evaluation Sub-Group

Diane Cameron, Chair

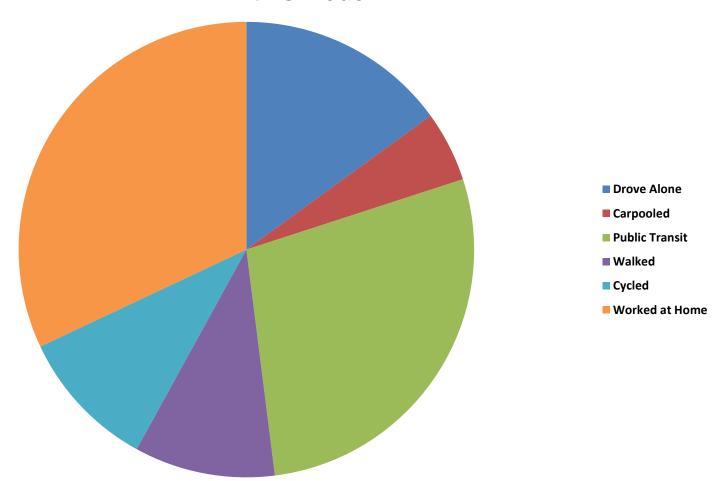
December 10, 2019

 The Evaluation Sub-Group performed a spreadsheet analysis of the Sustainable Transportation Demand Management (TDM) Vision for 2035: Baseline/BAU; TDM Vision; and TDM Moderate.

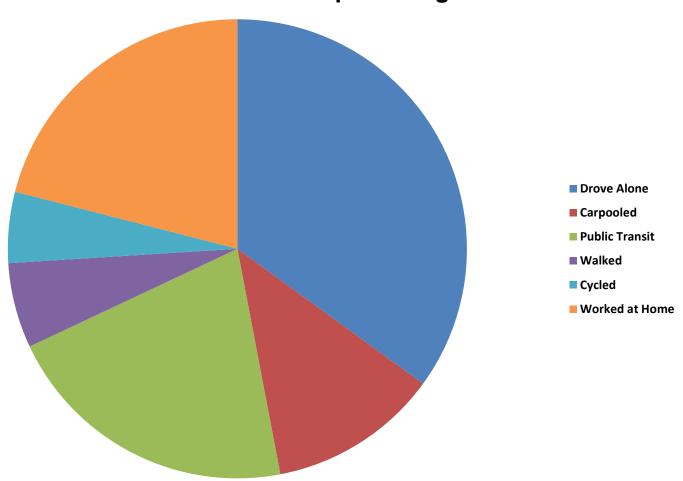




TDM - 2035 Scenario- percentage of commuters taking this mode



Moderate Scenario 2035 - percentage of VMTs



Evaluation Sub-Group Spreadsheet Analysis

- * The TTWG Evaluation Sub-Group evaluated the Transportation Demand Management 2035 Scenario. (TDM 2035 Scenario).
- * Mix of transportation modes for a Baseline Scenario plus two 2035 Scenarios (TDM and TDM Moderate). Presentation by Adriana Hochberg, How Are We Doing, provided numbers for GHG baseline, current modal mix.
- Compare with 2019 baseline modal mix and 2005 GHG emissions.
- GHG emission estimates: Multiply predicted Vehicle Miles Traveled for a given mode, by an emissions factor. Equation: Vehicle Miles Traveled/Year x kgCO2/Mile = GHG/year.
- TDM 2035 Scenarios assume 100% conversion to all-electric vehicles by 2035, with public transit vehicles using most advanced and efficient electric technology (BEV210).
- * Baseline / BAU for 2035 uses TPB data (Kanti Shrikanth presentation 8/13/19).
 - * The TDM 2035 Scenario describes a shift to people-centric transportation modes, and away from private vehicles (while assuming that many will still drive).
- TDM 2035 Scenario (including Moderate Scenario) assumes no new highways and no expanded highways are built between 2019 and 2035.
- Public investments in transit, walkability, bikeability, and working from home.

Examples of County Actions to Implement the Montgomery County, Maryland Sustainable Transportation Demand Management (TDM) Vision for 2035

- Take immediate legal action to stop the widening of I-270 and I-495.
- Take immediate action to remove proposed Mid-County Highway Extended (M83) from the Master Plan of Highways and Transitways (MPOHT) and local Master Plans.
- I-270, I-495 expansion, & M-83/MidCounty Highway Extended, would expand fossil fuel transportation infrastructure in MontCo, further lock-in increased carbon emissions.
- These actions confirm MontCo's shift to people-centric, climatetransportation solutions and free up public resources for transit.

Conclusion

 In our evaluation of the TDM 2035 Scenario, we found that Greenhouse Gas emissions in 2035 are reduced from 80 to 90 percent over 2005 levels.

