CAP Coalition Climate Actions Summary

Introduction

The CAP Coalition is proposing a County legislative package of six highly important climate actions that we urge the Council move forward on aggressively during this fall, as well as a list of other critically important climate actions that should be addressed by the Council, County Executive, MCPS, and MD state legislature in the coming year.

The Coalition is supportive of the Council's efforts to implement its 2017 Emergency Climate Mobilization resolution to use all available resources to:

- Declare a climate emergency and initiate a climate emergency and initiate a massive global mobilization to restore a safe climate and build a sustainable economy; and
- Transform the climate by reducing GHG emissions by 80% by 2027 and reaching 100% by 2035, and initiate large-scale efforts to remove excess carbon from the atmosphere.

To that end, we have focused on climate actions, many of which are part of the Climate Action Plan (CAP) and will accelerate the County's efforts to reach these goals. In advocating for specific climate legislation this fall, we have selected a package of climate actions that together will meet the requirements of being comprehensive, consequential, and equitable.

As an integral part of our proposal, we recommend the County follow the full range of Green New Deal principles in addressing climate change. Among these principles is the need to consider the human impact of its actions--what is the society we seek to create. Specifically, when the County provides financial, zoning, or other incentives or requires action for climate justice or any other purpose, it should require the strongest support legally permissible for these Green New Deal principles. The workers should be unionized or paid prevailing wages and benefits. They should be trained in union apprenticeships or equivalents as preparation for long-term careers. Priority in hiring should be given to hiring from BIPOC and economically-disadvantaged neighborhoods in Montgomery County. Priority should also be given to minority, women- and veteran-owned business and worker cooperatives. When workers are laid off or negatively affected by County actions, they should be made whole through a real Just Transition, including equivalent employment with training and replacement compensation.

Proposed Climate Action Legislative Package

The proposed climate action legislative package consists of the following six climate actions that the Coalition is asking the Council to introduce, discuss, and finalize this fall with adoption into law by early 2022.

1. Energy: Solar PV Systems (On-site and Community Solar) - Legislative

a. Summary of Issue:

The County needs to rapidly transition to carbon-free renewable energy to meet the goals of reducing GHG emissions 80% by 2027 and 100% by 2035. As part of this effort, increasing the building of on-site solar PV systems and community solar farms should be encouraged.

b. Legislative Solution:

- Incentivize building out more solar PV installations on single family homes and any other buildings of scale not covered by BEPS
- Promote additional community solar in the county for those who cannot install solar on their own property due to site constraints or other reasons.
- Amend County building code to require all new developments to install solar or meet solar-ready requirements, subject to well-defined exemptions.

Relevant CAP climate action: E-3, Promote Private Solar Photovoltaic Systems
Estimate GHG reduction: Medium (0.5 to 1.0M tons CO2 E)

2. Buildings: Reduce greenhouse gas emissions from existing single family homes and other buildings not covered by BEPS - Legislative

a. **Summary of Issue:**

Single-family homes are the source of 25% of GHG emissions in Montgomery County. As a complement to the existing BEPS legislation, the Council must focus on the fact that these emissions must also be reduced for the county to reach its climate emergency goals.

b. Legislative Solutions:

1. Start a pilot program for full electrification of homes currently using methane and other fossil fuels, beginning with energy efficiency, conservation, and weatherization, and prioritizing low and moderate income households. The goal is to learn from and expand based on the experience of the pilot program.

Relevant CAP climate action: B-2, Electrification standards for existing residential buildings
Estimate GHG reduction: High (greater than 1.0M tons CO2 E)

3. Transportation: Veirs Mill BRT Construction - Council legislative approval of CIP funding

a. Summary of Issue:

Veirs Mill Road is one of the highest ridership transit corridors in the state and is an important east-west connection. Half of the residents along the corridor are people of color and the median income is less than average. Traffic congestion hinders bus reliability and current service is not frequent. Veirs Mill has a planned bus rapid transit (BRT) line that would address these issues, but in the next six years, the county has not appropriated any construction funding. BRT would further transit equity, create a high-quality alternative to driving, and support sustainable land use/growth patterns along the corridor.

b. Legislative Solution:

Fund the BRT line for Veirs Mill! Transit upgrades would include queue jumps, new BRT stations with level boarding and off-board payment, Transit Signal Priority, purchase of new 60-foot articulated vehicles, and curbside dedicated lanes. Construction funding is estimated to cost $72 million and could be complete mid-2024 to late-2026.

Relevant CAP climate action: T-1, Expand Public Transportation

Estimate GHG reduction: Unknown. Estimate for all public transit actions is Medium (0.5 to 1.0M tons CO2 E)

4. Adaptation and Resilience: Stormwater Bill - Legislative

Summary of Issue:
Increasingly, residents of Montgomery County are reporting home flooding in areas not previously witnessed due to more intense rainfall events combined with increased impervious ground cover due to development or redevelopment. Such flooding is not covered by home insurance, causing homeowners to incur expensive costs to repair[1] or purchase FEMA flood insurance. Even worse, many developers apply for and receive stormwater waivers even for the minimal controls required for a small amount of rain[2]. Additionally, the current RainScapes program is 'on demand' and is not targeted to problem areas.

Extreme rainfall and overland runoff also overwhelms stormwater and drainage systems, sometimes causing expensive damage. Worse, recently we have seen flooding resulting in drownings not just in low water crossings but in apartments as well. Flooding occurs not just in designated flood zones. In fact, most flooding occurs outside of FEMA floodplains! This is a difficult problem largely due to the huge expense required to increase the size of our underground stormwater systems. We also want to avoid damage to stream banks due to increasing amounts and velocity of runoff surging through creeks. What we do on the land can make a difference, reserving expensive solutions for the most vulnerable areas.

Legislative Solution:
Council action would entail directing County staff to conduct two analyses to understand the extent and location of flooding problems in the County. The first analysis involves a survey to determine the extent of household flooding events, including estimated costs to homeowners, and location of flooding problems. The second analysis entails retention of a consultant to improve Hydrologic and Hydraulic modeling of the County stormwater drainage system, including an analysis of performance under scenarios of future precipitation. Both analyses should also examine demographics and age of infrastructure, and should include a discussion of how other counties or cities are tackling this issue. A single department (e.g., DOT or DEP) should be tasked to be accountable for this effort, in coordination with all relevant departments (i.e., DEP, DPS, DOT, OEMHS, MNCPPC, and the new County hydrologist) and must report the results of the analyses to the Council within 12 months. Subsequently, County staff must submit options for a proposed action plan focusing on sub-watersheds that integrates County programs and practices, incorporates new State requirements on flood management, and includes proposed amendments to County ordinances.

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[1] One study by the Takoma Park Stormwater Mobilization found that homeowners incur $3,000-$5,000 per event.

[2] A study by the Audubon Naturalist Society on behalf of the Stormwater Partners Network found that the lower county region (Bethesda, Chevy Chase, Kensington, Garrett Park, Cabin John, Glen Echo, Silver Spring, and Takoma Park) represents around 25% of the population and 8% of the land area. Between 2014 and 2020, the lower county region accounted for 88% of the 1,283 waivers granted. Over the same time period, the average cost of compliance with this requirement for single-family homes was $1,400. In these areas, so-called McMansions that maximize impervious lot coverage are replacing smaller, older homes, resulting in more home flooding.

Relevant CAP Climate Actions: A-1, A-10 thru A-13, G-5, G-7, and G-16

5. Sequestration: Forests and Urban Tree Canopy - Legislative

Summary of Issue: This issue is the number 1 priority for both sequestration and adaptation. Forests and trees are an essential component of limiting concentrations of greenhouse gases in the atmosphere by sequestering carbon. In addition, climate-change driven increases in extreme heat pose high risk of death and impairment. Lack of tree cover exacerbates the urban heat island effect and poses particular risk to vulnerable communities that historically have fewer trees. Meanwhile, areas undergoing dense development and redevelopment are rapidly losing trees. Furthermore, in contrast to efforts in some county programs to protect and add tree cover in the county, other county departments are too ready to remove trees when installing sidewalks, protecting power lines, etc. In addition, developer fees for obtaining tree waivers undervalue the real cost of replacing trees and the lost value provided by mature trees [3] and do little to dissuade tree removal. However, planting of trees and trees' subsequent growth results in uptake of carbon from the atmosphere.

Legislative Solution: The CAP Coalition strongly supports the proposal, subject to reviewing, that is under development by the Forests and Trees action group in collaboration with Councilmember Hucker and by reference incorporate their recommendations here. With this note, we emphasize that this is the highest priority for action for sequestration as well as adaptation.

Relevant CAP Climate Actions: S-1 and S-2

6. Governance: Climate Test/Impact assessment - Legislative

Summary of Issue: A climate impact assessment requirement is needed to ensure that key program, legislative , budgeting and regulatory decisions made by the county advance their climate goals and the plans. This critical tool is similar to the fiscal impact, economic impact or racial equity and social justice impacts analyses required by the county except that it would cover all key decisions and not just legislative actions. We are aware that both the County Department of Environment and Council Office of Legislative Oversight are in the process of developing proposals for such an assessment.

Relevant CAP Climate Actions: Broadened G-9.

Other Critically Important Climate Actions

The Coalition has identified additional climate actions are important to continue or begin focusing on next year and cover not only legislative priorities, but also actions that are seen as the responsibility of the County Executive, Montgomery County Public Schools, or Maryland state legislature to implement.

CAP Section: Energy

[3] The tree waiver fee is only $250 per tree and provides little disincentive.

7. State-level 100% Renewable Energy Portfolio Standard - State action

a. Summary of Issue:
In addition to implementing the County's Community Choice Energy (CCE) opt-out pilot program that was approved by the Maryland legislature in 2021, the County should continue to press for increased state-level requirements on utilities to transition to a 100% clean energy grid as soon as possible.

b. Solution:
- Support increasing the state's Renewable Portfolio Standard to 100% carbon-free electricity supply from the current RPS of 50% renewable by 2030
- Advocate for the County's MD delegation to set this as a priority for the FY22 Maryland legislative session
- Ask the Council to support bills that would require greenhouse gas reduction from buildings similar to what was in the Senate version of the Climate Solutions Now bill in 2021.

8. Geothermal Districts Pilots of Geogrids - Executive action (funding and operational)

a. Summary of Issue:
There is growing interest in developing geogrids[4] that make it possible to utilize geothermal energy as a renewable energy source within a residential or commercial district. Homeowners and commercial and public buildings can be part of a distribution network that optimizes geothermal energy production, consumption, and storage. Geogrid projects are currently being developed in Massachusetts and New York City.

b. Solution:
- Explore the feasibility and identify possible geothermal district pilots in the county
- Examine the benefits of reinstituting the county's property tax credit for geothermal systems

CAP Section: Buildings

Since the cleanest and cheapest form of energy is energy not needed, energy conservation elements of the energy actions below are the most important aspect.

9. Require greenhouse gas emissions reduction from new construction - legislative

a. **Summary of Issue**:
Newly constructed buildings will be here for decades. All new construction must be as close to net zero ghg as possible for the County to reach its GHG emission reduction goals.

b. **Legislative Solutions:**
1. Ban natural gas in new construction of single family homes and commercial buildings
2. Support a vigorous 2022 International Energy Conservation Code (IECC) for both single family homes and commercial buildings including the New Building Institute recommendations.

[4] HEET (MA group) uses the term geogrid or geoblock. Microgrids are most closely associated with electricity microgrids which are different. Here is a nice HEET summary doc.
https://mail.google.com/mail/u/0/?tab=rm&ogbl#inbox?projector=1

CAP Section: Transportation

10. Free Ride On Fares - Legislative

a. **Summary of Issue:**
Ride On bus fares (typically $2) have been free since March 2020 and will continue to be free until January 1, 2022. This alleviates a cost for bus riders (47% of whom make $30,000 or less per year) and makes riding the bus more attractive to new riders (estimated 15% increase). Fares are currently permanently free for kids, seniors, and people with disabilities.

b. **Legislative Solution:**
Make free fares permanent for all riders. This is estimated to cost $20 million/year. Needs to happen before January 1, 2022.

11. Express bus service on future BRT corridors - Executive action (funding)

a. **Summary of Issue:**
The BRT network plan to provide high quality bus service along the county's major transportation corridors is moving too slowly — the plan was conceived in 2013 and we only have US 29 BRT, opened in 2020. Bus service in Montgomery County needs to be reliable and frequent in order to attract more riders.

b. **Solution:**
While working toward full BRT, the county should provide limited-stop, highly frequent express bus service on all planned BRT corridors (AKA, Ride On Extra). This has already been provided in Rockville Pike and resulted in ridership gains.

CAP Section: Adaptation and Resilience

12. Adopt a *Cool Montgomery* Program and Campaign - Executive action (operational)
(Branding, outreach, and integration of the many measures in the CAP that address urban heat island and other sources of heating resulting in a more equitable and effective protection of public health and safety)

Summary of Issue:
Cooling Montgomery is an essential part of a larger global campaign to cool the planet. Moreover, the health and safety of the County's residents requires strategic attention to the increasing incidence of high heat days. Studies project the number of high heat days to significantly increase in Montgomery County. A carefully planned campaign to both directly and indirectly cool Montgomery County's physical structures and surfaces in both public and private spaces can achieve multiple benefits.

Solution:
Require County staff to integrate programs to address sequestration, urban cooling, and stormwater runoff issues and create and implement an aggressive and visible branding and outreach campaign to educate and engage the public and garner support for adaptation and

mitigation actions. All of the sequestration actions, and nature-based adaptation actions in the CAP can form the basis of a *Cool Montgomery* campaign. Such an outreach campaign should include engagement with BIPC and low income communities. We strongly advocate that a public process determine an integrated mix of actions to maximize sequestration of carbon, minimize urban heating, and improve management of stormwater runoff, as determined with broad and equitable participation from the public.

CAP Section: Sequestration

13. Education, Outreach, and Expansion of Existing Successful Programs that Improve Sequestration - Executive action (funding and operational)

a. **Summary of Issue:**
Existing programs, like Rain Gardens, Conservation Landscaping, and Green Streets, while successful, need to be scaled to reach more of the County. Where the programs are "on demand", they may only be reaching those communities with the awareness and resources to connect with the County's support.

b. **Solutions:**
Expand these programs with more staff, reimbursement funding, and marketing. Target the rain garden and conservation landscape program (ask current staff what they need) to maximize co-benefits including sequestration, management of stormwater, and urban cooling. (See also the related Stormwater topic in the Adaptation and Resiliency section.) Outreach to BIPOC and low-income communities should be a required element of these programs.

14. Agricultural Sequestration - Executive action (funding)

c. **Summary of Issue:**
Significant portions of the County's 93,000 acre Agricultural Reserve are managed using traditional forest, pasture, and farmland practices. Acres used to grow commodity crops , including sod, are likely net emitters of carbon. While Montgomery County and Maryland lead most other states in the application of best management practices, such practices are continually evolving. Concepts like "restoration agriculture" which integrate many layers of tree, shrub, and vegetable crops, can potentially both out-produce row crops - in calories and profit, as well as sequestering significant amounts of carbon in soil - are not yet widely part of practices in Montgomery County. Rural, suburban, and even urban land outside the Ag Reserve, can also potentially employ such practices to help improve carbon sequestration, enhance food security, including through support of community gardens, build economic resilience, and help cool the urban heat island through plant evapotranspiration. These improvements in carbon sequestration should be linked to maintaining the tax breaks for the Agricultural Reserve.

d. Solutions:

Establish or collaborate with healthy soils and food security task forces to expand sequestration and food security resilience. Invest in carbon intensive sequestration agricultural practices in the Agricultural Reserve and other agricultural locations - including community gardens - in the County by increasing budgetary allocations to appropriate County departments and agencies. Explore the creation of a system to incentivize sequestration, and a pilot program with selected farmers and landowners to accelerate agricultural sequestration. Conduct educational seminars both within County departments as well as with the general public, especially the farming community. (Related parts in the CAP include: S-4 Regenerative Agriculture; S-5: Restore Soil Fertility, Microbial Activity, and Moisture-Holding Capacity; S-6: Whole System Carbon Management and Planning)

15. Protect, Retain, and Restore Meadows and Wetlands - Executive Action (Funding and Operational

e. Summary of Issue:

While wetlands (lakes, streams, marshes) comprise perhaps ten percent of the County's area, they are especially important for a number of reasons. "Streams are the backbone of environmental sustainability. Water sustains life as it flows from rain through plants, wetlands and forests into waterways that lead to the Chesapeake Bay. Protecting streams and their buffers — wetlands, floodplains and slopes — is essential to a healthy environment. These sensitive areas provide habitat, cool clean water, and natural areas to absorb flood waters, avoiding damage to private property."[5] In addition to their role in our hydrology, as mentioned, a growing role is to buffer stormwater during extreme rainfall events; and through replenishment of groundwater, they serve a role to keep our forest, fields, and agricultural lands able to transpire moisture and provide regional cooling. Additionally, wetlands sequester the highest amount of carbon in their soils, in part because water retards oxidation of soil organic matter. Yet, our wetlands are under constant threat from development, pollution, and increasingly, extreme weather events.

f. Legislative or Other Solutions:

Foremost is to maintain (and where possible, expand) current wetlands protections. To that aim, the Council and staff can undertake to learn what specific actions would help to increase the amount of wetland area in the County. Possible actions could include expansion of existing wetland areas adjacent to lakes on land already under County control, daylight of streams where possible, and a review of "stream restoration" practices (under MS4) to perhaps guide such activities away from massive construction projects and toward more nature-based solutions. Review budgetary allocations with these priorities in mind. Conduct educational seminars both within County departments as well as with the general public to help people understand the key role our wetlands do and will play. (See also see the discussions of Cool Montgomery and Lot-to-Lot stormwater bill in the Adaptation and Resiliency section).

CAP Section: Public Engagement

[5] https://montgomeryplanning.org/planning/environment/

16. Public Engagement campaign - Executive action (funding and operational)

a. **Summary of Issue:** Public education and awareness is essential in today's increasingly climate dominated world. The county has not as yet implemented a comprehensive public education program and must do so this year. We ask the Administration to create with public input such a program this fall and budget for it in the FY23 budget. Any public education and engagement program should have the following characteristics:
   - Aim to reach every resident
   - Utilize a wide variety of media
   - Integrate on an ongoing basis into all public messaging and engagement efforts of the county
   - Provide residents opportunities to directly participate in community and County government events and activities
   - Provide them also with the information and tools to both make changes in their own lives and also to be effective advocates for collective changes, and
   - Evaluate the program periodically to measure success in achieving public engagement goals.

17. Climate Participatory Budgeting - Executive action (funding)

a. **Summary of Issue:** We ask the county to set aside $1 million to be allocated for climate citizen participatory budgeting through an open and transparent public engagement process. Such an effort will attract thousands of county residents and lead to more informed county climate action. It would also provide a powerful and easily replicable model for other jurisdictions to emulate. Participatory budgeting has been used in over 1500 communities to provide opportunities for residents to directly determine a portion of the community's public expenditures. It's time Montgomery did so as well, and climate is the place to start.

CAP Section: Governance

18. Climate Action Funding - Legislative

a. **Summary of Issue:** A portion of the Energy Tax proceeds should be allocated to the Green Bank and/or other entities to provide a stable source of funding to support climate actions that advance the county's climate goals and plans. This program should be designed to maximize the leverage of these funds.

Montgomery County Public Schools (MCPS) - School Board action

19. Extended producer responsibility (EPR) for the supplier that sells a plastic field: Require the supplier to take responsibility for disposing of the field at the end of its life (5-10 years). Synthetic turf fields cannot be recycled or even burned and many wind up being dumped illegally. An improperly disposed synthetic turf field produces greenhouse gas and is a point source that pollutes groundwater.

20. Athletic playing fields: Ban use of public funds to convert carbon sequestering grass playing fields to plastic heat islands (synthetic turf fields) in any urban areas.

Maryland State Legislation

21. Low-Income Energy Efficiency Bill: We urge the County Council to pass a resolution supporting Del. Charkoudian's bill for the FY22 legislative session.

Summary List of the Coalition's Recommended Climate Actions

Below is a list of the climate actions discussed above. We have grouped them according to the following categories.:

- Council legislative action
- Executive action - funding
- Executive action - operational
- State action
- MCPS action

The actions that have an asterisk next to their name are those included in the proposed climate action legislative package.

Council legislative action:

Executive action - funding:

Executive action - operational:

#12 -. Adopt a Cool Montgomery Program and Campaign - Page 6

State action:

#7 - State-level 100% Renewable Energy Portfolio Standard - Page 5

#21 - Low-Income Energy Efficiency Bill - Page 10

MCPS action:

#19 - Extended producer responsibility (EPR) for the supplier that sells a plastic field - Page 10

#20 - Athletic playing fields - Page 10