Maryland Commission on Climate Change
Mitigation Working Group
2019 Work Plan
Updated 12/14/2018

Purpose

During its 2015 session, the Maryland General Assembly codified the Maryland Commission on Climate Change (MCCC) into law, and charged the Commission with advising the Governor and General Assembly on ways to mitigate the causes of, prepare for, and adapt to the consequences of climate change. The MCCC is chaired by MDE Secretary Ben Grumbles and consists of 26 members representing diverse interests in the State.

The Mitigation Working Group (MWG) is one of four working groups that support the objectives of the Commission. The purpose of the MWG is to recommend regulatory, market-based and voluntary programs to reduce greenhouse gas (GHG) emissions. These strategies are to be designed in support of a strong economy and job creation in Maryland.

Membership

The MWG is a balanced group co-chaired by three commission members (state agency, business representative, and environmental advocate), with administrative support provided by Maryland Department of the Environment (MDE) staff. A complete membership roster is located in Appendix A of this document.

2019 Priorities

The MWG is partially driven by the schedule set by the 2016 Greenhouse Gas Reduction Act (GGRA) legislation, which required MDE to present a draft plan to the Governor and General Assembly by the end of 2018, outlining specific strategies to achieve the most recent benchmark GHG emission reduction requirement (40 percent reduction from 2006 levels by 2030). Furthermore, the plan has been developed in recognition of the IPCC's finding that developed countries must reduce GHG emissions between 80 to 90 percent below 1990 levels by 2050. The MWG agrees that such considerations for reductions beyond 2030 are important to achieving long-term emission reduction goals, especially when it comes to actions which may take longer to achieve results. Due to the significance of the GGRA Plan for the State's climate change mitigation targets in 2030 and beyond, the MWG has provided guidance and assistance to MDE during the development of the draft, and intends to continue to do so in 2019 once the draft plan is released. However, the topics chosen by the MWG for discussion this year are not singularly applicable to this plan, and may more generally address future climate actions within Maryland. Accordingly, the 2019 MWG Work Plan focuses on reviewing the draft plan for particular elements that the group has been refining over the past several years, and taking on some emerging/evolving topics as well. Appendix C contains more detail on the expected meeting topics, taken from the MWG's 2018 recommendations, the minority note in the 2018 Commission report, and discussion at the working group. Below you will find a very abbreviated version of this plan.

1. Analysis of the draft GGRA Plan, including: tracking of data/indicators to monitor progress, ensuring quality job creation, equity considerations, and compatibility of the plan with long-term goals.
2. Transportation measures, including: market-based programs, EV and infrastructure technologies and goals, ZEV school and transit buses, travel-demand management strategies, and transition timelines.
3. Energy measures, including: a long-term pathway and timeline, and mechanisms to achieve the pathway such as RPS, RGGI, enhanced solar, and energy efficiency.
4. Emission reduction measures, targets, and timelines for residential and commercial buildings.
5. Land Use and conservation mechanisms, including those related to soil carbon sequestration and other agricultural practices, net forest and tree canopy gains, and sustainable growth and development plans.
6. Additional items such as strategies for net zero waste, State procurement procedures, federal decisions, and a carbon pricing program.

Process

The MWG has access to a wide variety of internal and external assets, including the expertise and resources of MWG members, various State agencies, and the three other working groups of the Commission. In the past, the MWG has regularly sourced subject matter experts to inform its discussions and recommendations, and plans to continue doing so in 2019. Relevant information and analysis will be requested from appropriate state agencies or other institutions (public and private), as necessary to have robust discussions on the mechanisms and pathways called for under the individual topics listed in Appendix C of this document. The MWG will also coordinate with the Scientific and Technical Working Group (STWG), the Adaptation and Response Working Group (ARWG) and the Education, Communication and Outreach Working Group (ECO) on cross-cutting issues as appropriate.

The ultimate aim of each meeting - whether the context is discussion, analysis, identification, assessment, or evaluation - will be to develop an associated recommendation for the appropriate parties moving forward. It is the goal of the MWG to make these recommendations as specific as possible. Recommendations may call for execution of specific measures, programs, or pathways; or they may identify specific information needed to determine the appropriate measure, program, or pathway, and call for action related to gathering and analyzing such information.

Schedule of Meetings

Appendix D of this document provides a summary of MWG meetings scheduled for 2019, as well as tentative topics and action items.

Mitigation Working Group Membership
Updated 11/29/18

Leadership	
Michael Powell	Co-Chair
Stuart Clarke	Co-Chair
Tad Aburn	Work Group Lead

Representatives of Environmental Organizations	
Stuart Clarke (co-chair)	Town Creek Foundation
Joe Uehlein	Labor Network for Sustainability
Jana Davis	Chesapeake Bay Trust
Arjun Makhijani	Institute for Energy and Environmental Research
Tamara Toles O'Laughlin	Maryland Environmental Health Network
Representatives of Academic Institutions	
Gerrit Knaap	University of Maryland, National Center for Smart Growth
Ben Hobbs	Johns Hopkins University
Representatives of Renewable and Traditional Energy Providers	
Heidi Hawkins	Exelon
R. Daniel Wallace	Bithenergy
Tom Weissinger	Talen Energy
Tom Dennison	Southern Maryland Electric Cooperative
Representatives of Business Interests and Labor Organizations	
Michael Powell (co-chair)	Gordon Feinblatt LLC
Tom Ballentine	NAIOP - Real Estate Development
Mike Remsberg	Trinity Consultants
Drew Cobbs	American Petroleum Institute
Colby Ferguson	Maryland Farm Bureau
Jim Strong	United Steelworkers
Gerald Jackson	UA Plumbers and Steamfitters
Representatives of State and Local Government Agencies	
George "Tad" Aburn (working group lead)	Department of the Environment
Colleen Turner	Department of Transportation
Chris Rice	Energy Administration
Elliott Campbell	Department of Natural Resources
Susan Payne	Department of Agriculture
Tom Walz	Department of Housing and Community Development
Les Knapp	Maryland Association of Counties
Lisa McNeilly	Baltimore Office of Sustainability

Steering Committee	
George "Tad" Aburn	Maryland Department of the Environment
Michael Powell	Business Community Representative
Stuart Clarke	Town Creek Foundation
Colleen Turner	Maryland Department of Transportation
John Fiastro	Maryland Energy Administration
Elliott Campbell	Maryland Department of Natural Resources
Susan Payne	Maryland Department of Agriculture

Mitigation Working Group Recommendations from the 2018 Report

1. The State's 40 by 30 Plan should build from the many programs already contained in the final 25 by 20 Plan that are expected to continue generating reductions beyond 2020, following an internal review of implementation to date.

2. The State's 40 by 30 Plan should continue to examine measures that may be critical for meeting long-term goals, such as an 80%-90% reduction in GHG emissions or carbon neutrality by 2050, and should ensure that proposed programs are compatible with achieving these goals.

3. The State's 40 by 30 Plan should include new programs that have been discussed by the MWG and may have been finalized by State or legislative action. For programs that have been finalized, the GHG reductions and economic benefits should be quantified and included in the 2018 draft plan. For evolving programs that have been discussed but not adopted, the 2018 draft plan should provide available information as well as pros and cons on each of these measures, and ask for specific comment.

4. The State's 40 by 30 Plan should include explicit discussions of uncertainty. Examples may include emission reduction quantification, economic and job creation analysis, life-cycle emissions and the potency of short-lived climate pollutants. To the extent possible, these uncertainties should factor into efforts to exceed the 40 by 30 emission reduction goal.

5. The State's 40 by 30 Plan should include information and analysis on efforts to address social equity, and how proposed strategies impact underserved and environmental justice communities, including equitable distribution of both costs and benefits. This should address public health, environmental, economic, and job creation impacts.

6. The State's 40 by 30 Plan should include a section that is explicitly focused on 'social and environmental justice'. This section should be developed through outreach and in partnership with urban and rural communities that have experienced particular socio-economic disadvantage and environmental burden. This section should specifically identify (a) the strategies, programs, and actions in the Plan that are expected to advance social and environmental justice objectives; (b) the objectives that these strategies, programs, and actions are expected to advance; and (c) the process by which progress towards these objectives will be assessed.

7. The State's 40 by 30 Plan should include specific goals, objectives, action plans, and evaluation and reporting protocols related to (a) ensuring the production of sustainable economic benefits from climate action strategies, policies, and programs; (b) addressing economic dislocations caused by climate strategies, policies and programs; and (c) improving the response of vulnerable communities to stressors and shocks.

8. The State's 40 by 30 Plan should include analysis and information on efforts designed to ensure a just transition for fossil-fuel-dependent workers, and other workforce-related issues linked to the State's efforts to reduce GHG emissions.

9. MDE, in collaboration with other State agencies, should seek relevant assistance from and work with Maryland academic institutions to develop a robust evaluation component as part of the 40 by 30 Plan. A sound evaluation component would include goals, objectives, indicators, metrics, implementation benchmarks, timelines, and reporting protocols that would allow for 'clear and complete understandings of the strengths, weaknesses, successes, and shortcomings of the strategies and programs that the state is employing'.

10. The 2020 manufacturing study required by the GGRA should explore the overall costs and benefits (both economic and environmental) of the Maryland GGRA on the manufacturing sector.

11. The 2020 manufacturing study required by the GGRA should explore the general feasibility of, and mechanisms for (a) potential modifications or enhancements to the current "buy local" provisions in the GGRA Plan, including the use of domestic iron, steel, and manufactured products in energy-related construction; (b) "Buy USA-Made" policies; and (c) the development of an in-state supply chain to create lasting manufacturing and other jobs related to renewable energy infrastructure, including committing additional funding for state-certified or otherwise accredited apprenticeship programs to support the workforce needs of clean energy industries, and collaborating proactively with industry and unions to develop local manufacturing capacity for offshore wind and solar industries.

12. As part of the process to meet the State's current light-duty zero emission vehicle (ZEV) goals and projections, the Maryland Electric Vehicle Infrastructure Council (EVIC) should specifically assess: (a) bolstering the State's consumer purchasing incentives for ZEVs, and regulatory and financial incentives for high power/speed ZEV infrastructure installation, including particular attention to investments and incentives for challenging areas; (b) policies that employ Maryland's public utilities to aid in efforts to rapidly and equitably expand EV infrastructure in Maryland, with specific targets in rural areas; and (c) policies that make it easier to install EV charging infrastructure at multi-family housing locations with attention to high density, urban populations.

13. MDOT should continue to research and evaluate the GHG emission reduction potential of vehicle and infrastructure technologies, including: connected and autonomous vehicles; EVs and other ZEVs; transportation network companies/shared rides; and system operations. The evaluation effort should include consideration of safety, congestion, and equity issues including public health, economic, and workforce impacts.

14. MDOT should continue to enhance travel demand management strategies, land use/smart growth, active transportation, and inter-city travel strategies, in collaboration with MDP and other State agencies and stakeholders.

15. MDOT should develop tracking of key indicators of GHG reduction strategies to monitor progress of achieving goals. Examples include state facilities and fleet adoption of renewable/low-emissions energy sources, ZEV penetration, equity indicators to track participation, congestion levels, per capita VMT, mobility access, and adoption of low-emissions vehicle technology for personal use.

16. MDOT, MDE, MEA, Department of Budget and Management and the Department of General Services should review state fleet procurement procedures and practices and provide direction on procurement of EVs and other ZEVs, and associated charging/filling station installation guidance and targets, by October 2019.

17. MDOT should work with other appropriate agencies and stakeholders to examine the costs and benefits of supporting deployment opportunities of ZEV school and transit buses in Maryland. The analysis should include: (a) capital, maintenance and operating cost comparisons; (b) research into the viability of ZEVs as well as hybrid and alternative fuel technologies; (c) emissions reduction benefit summaries; and (d) potential goals to fully electrify bus transport in the State, including targets for deployment and provisions for low-interest financing.

18. MDE, MDNR, and MDA should utilize best available scientific data on land-based carbon sequestration and GHG emissions for existing GGRA programs, in collaboration with the University of Maryland/NASA Carbon Monitoring System program, the US Forest Service, and the MCCC Scientific and Technical Working Group.

19. MDNR should add a program on the carbon benefit of land conservation and avoided forest conversion through compliance with Maryland's Forest Conservation Act.

20. MDNR and MDE should continue tracking progress of wetland restoration and biomass to energy, but not project a carbon reduction associated with these programs, due to uncertainty in wetland methane emissions and establishment of new biomass to energy facilities in the state.

21. MDE, MDNR, and MDA should adopt the term "Natural and Working Lands" to refer to all GGRA programs concerning land-based carbon sequestration and avoided emissions of carbon or other GHGs. This will allow Maryland to better align with the effort coordinated by the US Climate Alliance.

22. House Bill 1063, passed during the 2017 legislative session, established a Healthy Soils Program and requires MDA to provide incentives, including research, education, technical assistance, and subject to available funding, financial assistance to farmers to implement the management practices that promote soil health and sequester carbon. MDA, MDNR, and MDE should work together through the Adaptation and Response and Mitigation Work Groups, as well as the Healthy Soils Consortium, to indentify long-term sources of funding to support the purposes of the Healthy Soils Act.

23. Maryland should expand its wholesale-rate, net-metering benefit for combined heat and power (CHP) in accordance with PJM's pending recommendations.

24. Maryland should create a statewide CHP stakeholder working group, led by MEA, to discuss key issues and develop standardized processes across the State of Maryland, and to engage in outreach to smaller utilities in order to provide technical support for CHP projects.

2019 Detailed Meeting Priorities
(subject to change based on working group decisions)

1. The GGRA Plan

- Assess ways to enhance existing efforts to track key data and other indicators of GHG reduction strategies to monitor progress and ensure that the State is achieving the goals of the GGRA.

- Analyze the GGRA Plan to determine whether it promotes quality job creation in Maryland through its strategies and policies, and/or exploring what strategies might be employed to do so. Affirm or consider the definition of quality jobs, including the following: (1) family-sustaining wages and benefits; (2) a pathway for workers to form a union and engage in collective bargaining without fear of harassment or reprisal; (3) hiring opportunities for disadvantaged communities; (4) training and advancement opportunities.

- Analyze the GGRA Plan's equity considerations, and discuss the utility of a distinct program to assess and address equity issues.

- Analyze the long-term implications of the 40 by 30 Plan, and ensure that proposed programs are compatible with achieving potential goals, such as: an 80-90% reduction in GHG emissions, carbon neutrality by 2050, or deeper reductions as called for by the IPCC 1.5 report.

2. Transportation

- Discuss and analyze current efforts to analyze the concepts being developed through the Transportation Climate Initiative (TCI) to implement a market-based program to reduce GHG emissions from the transportation sector, and other similar program options.

- Continue to research and evaluate the GHG emission reduction potential of vehicle and infrastructure technologies, including connected and autonomous vehicles (CAV), EVs, and system operations. The evaluation effort should consider safety, congestion, and equity issues including public health, economic, and workforce impacts.

- Discuss and analyze the Electric Vehicle Infrastructure Council (EVIC) and the Zero Emission Vehicle (ZEV) MOU efforts to increase electric vehicle (EV) refueling infrastructure and EV sales in Maryland and on the East Coast, with an effort to maintain Maryland's leadership role on the East Coast.

- Discuss ways to enhance travel demand management (TDM) strategies and other strategies linked to smart growth and land use, active transportation, and inter-city travel. This should include and assessment on expanding public transportation investments, including existing WMATA and MTA funding as well as projects that integrate transportation and more sustainable land use planning (e.g. Corridor Cities Transit, Red Line, MARC expansion initiatives).

- Discuss and analyze the costs and benefits of deployment opportunities of ZEV school and transit buses in Maryland, including: (1) capital, maintenance and operating costs; (2) the viability of ZEVs, hybrid, and alternative fuel technologies; and (3) emissions reduction benefit summaries.

- Develop a conceptual schedule for these transitions in the transportation sector, which should take into account: carbon emissions (climate change); other emissions (general air quality); environmental and public health benefits; and impacts to both underserved and environmental justice communities. This effort should also identify tools to make the transitions as timely and economically productive as possible.

3. Energy

- Discuss and determine the specifics of a feasible long-term pathway for the energy sector, including: reducing and/or ceasing production from Maryland's six large-scale coal electricity generators; reducing and/or ceasing the use of natural gas (without carbon capture) in the electricity sector; and increasing production from Maryland solar power. Develop a conceptual schedule for the timing of these critical transitions, which may include both a more realistic and a more ambitious pathway.

- Analyze and identify specific mechanisms for achieving the desired transition pathway (or, information needed to determine appropriate mechanisms), including potential details and logistics of: an enhanced renewable portfolio standard; an improved and/or expanded RGGI (either scope or breadth); a solar pathway that includes a blend of rooftop, community, and utility-scale solar; and energy efficiency targets.

- The bridge strategies and the timing of the bridge strategies should take into account: carbon emissions (climate change); other emissions (general air quality); environmental and public health benefits; impacts to both underserved and environmental justice communities; and impacts to communities and workers traditionally reliant on fossil fuel facilities.

4. Buildings

- Analyze and determine specific targets and timelines for decreasing emissions from residential and commercial buildings (or, information needed to determine such targets and timelines), including: annual building retrofit targets; specific energy efficiency targets; a timeline for requiring all new buildings be carbon neutral; and a timeline for replacing fossil-fuel heating systems with electric heating or other low-carbon systems.

- Analyze and identify specific mechanisms for decreasing emissions from residential and commercial buildings (or, information needed to determine appropriate mechanisms), including: expanding programs that support upgraded electric heating and cooling system; new programs to encourage combined heat and power; incentives and other strategies that support the replacement of fossil-fuel heating with electrical systems.

5. Land Use and Conservation

- Analyze and identify specific mechanisms to reduce net carbon emissions through agriculture (or, information needed to determine feasible mechanisms), such as: practices that sequester carbon by improving soil health (e.g., regenerative agriculture); mechanisms for a permanent source of funding for the healthy soils program; and enacting or extending a program which links renewable energy opportunities to climate-friendly agricultural practices.

- Analyze and identify mechanisms to achieve net forest and tree canopy gains in Maryland (or, information needed to determine feasible mechanisms), such as forest management, tree planting programs, a strengthened Forest Conservation Law, and linking such programs to Bay restoration efforts; and identify a target time frame for achieving specific goals.

- Discuss and determine appropriate goals for future growth and development in Maryland (or, information needed to determine appropriate goals), such as more aggressive and explicit compact development, sustainable growth incentives, and management programs, and identify a timeline for these goals.

6. Additional Items

- Continue to analyze strategies that would move the State towards zero waste concepts as expeditiously as practicable.

- Review and develop a recommendation for State procurement procedures and practices, either generally or as related to specific sectors, including on EV procurement and EV charging station installation guidance and targets.

- Discuss and analyze the State's efforts to challenge changes being proposed at the federal level that weaken key national programs to reduce GHG emissions (e.g., changes to the Clean Power Plan and changes to federal fuel efficiency and vehicle standards).

- Explore methods of executing a general (systemic) carbon pricing program, including expanding/strengthening RGGI, and a TCI cap and invest program.

MWG Meeting Schedule for 2019
Updated 01/02/2019
Subject to Revision by the Working Group

Date/Time	Topic
Tuesday **January 15** 10am – 12:00pm	*2019 Work Plan Finalization*
Tuesday **February 12** 10am – 12:30pm	
Tuesday **March 12** 10am – 12:30pm	
April 18th	
Tuesday **April 16** 10am – 12:30pm	
Tuesday **May 21** 10am – 12:30pm	
June 20	
Tuesday **June 18** 10am – 12:30pm	
Tuesday **July 16** 10am – 12:30pm	*Draft Recommendations*
Tuesday **August 13** 10am – 12:30pm	*Final Recommendations*
September	
Tuesday **September 17** 10am – 12:30pm	
October	
Tuesday **October 15** 10am – 12:30pm	
November	
Tuesday **November 19** 10am – 12:30pm	*Draft 2020 Work Plan*
Tuesday **December 17** 10am – 12:30pm	*Final 2020 Work Plan*