

Adaptation and Resiliency Working Group 2021 Work Plan

PURPOSE

The Maryland Commission on Climate Change (MCCC) is charged with advising the Governor and the Maryland General Assembly on ways to mitigate the causes of, prepare for, and adapt to the consequences of climate change and maintaining and strengthening the state's existing Greenhouse Gas Reduction Plan (GHG Plan). The Commission is supported by a Steering Committee and four working groups. The members of the working groups are appointed by the MCCC Chair and include representatives of academic institutions, renewable and traditional energy providers, environmental organizations, government agencies, labor organizations and representatives of the business community. The Adaptation and Resiliency Working Group (ARWG) is charged with developing and implementing a comprehensive strategy for reducing Maryland's climate change vulnerability, and providing state and local governments with tools to plan for and adapt to climate impacts such as extreme weather and sea level rise.

At the same time the state moves forward with actions that are reducing greenhouse gases, increasing energy efficiency, and improving air quality, we must also adequately adapt or climate impacts will remain a concern into the future. In fact, Maryland is already experiencing an increase in extreme weather events, presenting new adaptation challenges in both coastal and non-coastal communities.

ADAPTATION PROGRESS

The "Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change"¹ (henceforth referred to as the Adaptation Strategy) includes short-term and long-term measures that state and local governments can implement to plan for and adapt to the diverse impacts of climate change. Eleven years have passed since the MCCC drafted the "Adaptation Strategy Phase I: Sea-level rise and coastal storms" and it has been eight years since the drafting of "Phase II: Building societal, economic, and ecological resilience." Within that decade, a tremendous amount of progress has been made, but new information and data has become available and there is still much work to be done to ensure a resilient, prosperous future for Maryland's people, environment, and economy.

While the issues presented below are not an exhaustive list of all the climate change adaptation-related topics ARWG member agencies will work on this year, these have been identified as some of the most pressing issues with the most opportunity for progress to be

¹ The Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change includes both [Phase I: Sea-level rise and coastal storms](#) published July 2008 and [Phase II: Building societal, economic, and ecological resilience](#) published January 2011.

made in 2021. Many items are exploratory, and therefore may become recommendations or work plan items for 2022 and beyond.

2021 PRIORITIES FOR ARWG ACTION

The approach to achieving these priority actions will be informed by the robust feedback received at the February 22 ARWG meeting. Through a series of survey questions on each of the priorities, ARWG members and participants weighed in on the scope, intent, approach, timeline and needs in order to achieve the work plan priorities. Details of the survey responses can be found on the webpage for the ARWG Meeting materials from Feb. 22, [found here](#).

1. *Adaptation Indicators and Report Card*. In 2021, ARWG will continue working with the University of Maryland Center for Environmental Sciences (UMCES) to finalize the Maryland Coastal Adaptation Report Card. Once complete, ARWG will consult the Education, Communication and Outreach (ECO) workgroup to advise on a communications outreach strategy that effectively communicates to all climate stakeholders the existence of the report card. ARWG and its partners will identify where best to integrate the identified indicators and report card findings into programming to help further the goals of the State of Maryland and the MCCC. (Requested by the Commission in 2019, completion in 2021).
2. *Evaluate and Update the State's Adaptation Strategy*. Building on the efforts initiated in 2020, ARWG and partners will continue development of a framework to guide the state's adaptation efforts. The framework will guide and prioritize action over the next ten years, specifically in vulnerable and underserved communities. The approach includes five sectors:
 - Water resources
 - Human health
 - Working Lands and Natural Resources Based Economy
 - Natural resources and
 - Protecting critical infrastructure.

There are also three cross-cutting focus areas: environmental justice, climate jobs and training, and state service delivery and local government to ensure the strategy is comprehensive and integrated. (Requested by the Commission in 2019, completion in 2021).

3. *Water Quality and Climate Change Resiliency Portfolio*. In 2020, the Resiliency Opportunity Zones: Maryland's Climate and Water Quality Restoration Portfolio was completed by DNR. The Portfolio provides the foundation for a broader effort, one that will help identify specific communities for more focused work and development of community specific conservation and restoration portfolios. The Portfolio will continually evolve as it is integrated into decision making at the state and local levels. ARWG will support this integration and revision effort by providing expertise, review, and input on criteria and applicability. ARWG will also serve as a connector between the effort and local and state partners looking to implement this Portfolio into decision making. (Identified in the State's Phase III Watershed Implementation Plan, completion in 2021).



4. *Advance Saltwater Intrusion Plan Recommendations.* The ARWG will continue to support the Maryland Department of Planning in furthering and advancing the recommendations set forth in the final plan ([Maryland's Plan to Adapt to Saltwater Intrusion and Salinization](#)). The ARWG will receive periodic updates from the Maryland Department of Planning (MDP) regarding this effort and will confer with MDP and other state agencies on how to increase or expedite plan implementation. Topics will include exploring ways to use existing land conservation and easement programs to assist landowners, dissemination of information to key stakeholders, and engaging subject matter experts.
5. *Maryland's Climate Leadership Academy.* ARWG and partners will continue to foster a community of climate-smart local government and infrastructure leaders through participation in and promotion of the Maryland Climate Leadership Academy. ARWG will help identify content for the online learning lab and short courses to help advance Commission goals and initiatives (i.e., Maryland Energy Administration-specific training, Maryland Department of Health-specific training, Coast Smart guidance on new program update). Efforts will be directed to developing a "short course" on identified sector specific training. Relevant climate training identified by ARWG, the MCCC and partners will be developed for deployment through the Climate Leadership Academy.
6. *Environmental and Climate Justice.* ARWG will continue coordinating with other MCCC working groups and engaging environmental justice partners, including the Commission on Environmental Justice and Sustainable Communities (CEJSC), to ensure that we thoroughly and meaningfully integrate environmental justice, diversity and inclusion into all of our programming and initiatives. This will help ensure that vulnerable, underserved and under-resourced communities are given assistance and resources to prepare for and adapt to the impacts of climate change.

ONGOING WORK FOR 2021 STATUS UPDATES

- A. *Human Health Implications of Climate Change:* ARWG partners will continue to provide tools, resources, and technical assistance for citizens, communities, non-governmental organizations, schools, local governments, planners, and state agencies to help them think about health and use health data as they develop climate change plans. ARWG partners will also continue to ensure public health considerations are integrated in community forums that address climate adaptation efforts. ARWG members commit to tracking these efforts via the Maryland Environmental Public Health Climate Adaptation Tracker online mapping portal.
- B. *Addressing Increased Precipitation at the Local Level:* Maryland's average annual precipitation is projected to increase 10% from the current average by 2100. The frequency of extreme precipitation events is also anticipated to increase, which our existing gray infrastructure (e.g. stormwater systems) and green infrastructure investments (e.g. water quality BMPs) may not be able to effectively manage. Several research projects have been completed, with more underway, to model possible changes to precipitation regimes resulting



from climate change. Continuing in 2021, MDE, DNR, and others will continue to track the state of the science on projecting climate change impacts on precipitation, with a focus on how the results of the research could help Maryland communities better assess their localized flood risks and plan to become more resilient to precipitation-induced flooding.

- C. *Healthy Soils Initiative*: 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 ARWG and Mitigation Work Group, as well as the Soil Health Advisory Committee, to identify dedicated long-term sources of funding to support the purposes of the Healthy Soils Act.
- D. *Building Capacity to Compete for Natural Infrastructure Resiliency Funds* - The ARWG continues to recognize the need to prepare Maryland and its communities to take advantage of upcoming federal funding (e.g. FEMA, NOAA, USACE) and public private partnership (P3) opportunities that promote the use of natural infrastructure to build resilience to climate impacts. DNR is already leveraging beneficial use of dredged material opportunities to reduce project costs and make applications more competitive, and this could serve as a model as these larger-scale funding opportunities emerge. DNR will lead a group of ARWG partners throughout 2021 to discuss landscape-level needs for natural and nature-based (NNBF) project identification so that Maryland and its communities are better situated to compete for future funding.
- E. *Integrating Climate Change into the Phase III Watershed Implementation Plan* - The ARWG and partners will continue to work with the Governor's Bay Cabinet and the Chesapeake Bay Program (CBP) Phase III Watershed Implementation Plan (WIP) teams to account for the additional nutrient and sediment loads resulting from climate change. Through this engagement, ARWG members and partners will provide updates on activities that are listed in the WIP and milestones to ensure a comprehensive understanding of activities and progress on climate change efforts across the state are captured. Maryland's Phase III Watershed Implementation Plan² was submitted to EPA in August 2019.
- F. *Dam Safety*: As precipitation increases it is vital to ensure Maryland dams are resilient to the effects of climate change. Continuing in 2020 MDE will lead work to: prioritize inspections of significant and high hazard dams, assess their condition, and require repair or removal of dams where necessary to protect life and property. MDE, in consultation with MEMA and other ARWG partners, will also ensure adequate emergency preparedness by requiring owners to complete routine updates of dam Emergency Action Plans and by providing technical assistance to dam owners to implement table-top exercises for these Emergency Action Plans. MDE will develop intra-agency standard operating procedures for emergency response to individual and multiple dam failure incidents.

² Maryland's Final Phase III Watershed Implementation Plan.

<https://mde.maryland.gov/programs/Water/TMDL/TMDLImplementation/Pages/Phase3WIP.aspx> Published August 2019



ARWG Membership Roster

As of Feb. 28, 2021

ARWG Chair: Secretary Jeannie Haddaway-Riccio, Department of Natural Resources

ARWG Coordinator: Allison Breitenother, Department of Natural Resources

House Delegate Member: Dana Stein, Maryland General Assembly

Public Sector Representatives

Fredrika Moser, Maryland Sea Grant

Jim Bass, Eastern Shore Land Conservancy

Eric Myers, The Conservation Fund

State-Agency Adaptation Sector Leads

Matthew Rowe, Department of Environment on Water Resources

Vacant, Department of Natural Resources on Forest and Terrestrial

Kyle Overly, Maryland Emergency Management Agency on Emergency Management

Bruce Michael, Department of Natural Resources on Bay and Aquatic

Clifford Mitchell, Department of Health and Mental Hygiene on Health

Jason Dubow, Department of Planning on Growth and Infrastructure

Susan Payne, Department of Agriculture on Agriculture

Sandy Hertz, Department of Transportation on Transportation Growth and Infrastructure

Catherine McCall, Department of Natural Resources on Coastal Hazards

Gregory Derwart, Maryland Insurance Administration

Technical Advisors

Katherine Charbonneau, Critical Area Commission

Vacant, Department of Budget and Management

Scott Zacharko, Department of the Environment

Kevin Wagner, Department of the Environment

Nell Ziehl, Department of Planning - Maryland Historical Trust

Spyridon Papadimas, Department of General Services

Lisa Lowe, Department of Information Technology

Sasha Land, Department of Natural Resources

Megan Granato, Department of Natural Resources

Matthew Fleming, Department of Natural Resources

Vacant, Department of Transportation - State Highway Administration

Shawn Kiernan, Department of Transportation - Maryland Port Administration

Vacant, Local Government Representative

JaLeesa Tate, Maryland Emergency Management Agency

Joy Hatchette, Maryland Insurance Administration



ARWG Meeting Schedule for 2021*

All meetings take place 2:00 - 4:00pm

Date/Time	Location	Agenda Topics
February 22	Google Meet: https://meet.google.com/jod-jcpg-sez	<ul style="list-style-type: none">- ARWG Priorities survey- Work plan 2021 Review
April 26	Google Meet: https://meet.google.com/bjp-dgcv-ntk	<ul style="list-style-type: none">- Flood Awareness Month
June 28	Google Meet: https://meet.google.com/dsp-btqh-vks	
September 20	Google Meet: https://meet.google.com/rxp-ccih-ajg	<ul style="list-style-type: none">- Recommendations drafting for 2022- 2021 Work plan and priority check in
November 8	Google Meet: https://meet.google.com/axe-gnxc-agh	

Schedule reflects major ARWG meetings and actions.

**Meeting dates, time and topics subject to change.*

