Draft Adaptation & Response Working Group (ARWG) Recommendations for the 2018 Maryland Commission on Climate Change (MCCC) Annual Report

Draft 9/7/2017

These recommendations are based on and draw from (1) discussions, actions and suggestions made at quarterly ARWG meetings; (2) ARWG staff dialogue with individual ARWG members during 2017; and, (3) suggested items recommended for consideration from MCCC members.

ARWG members provided feedback on below list of recommendations and additional input will be sought at the September 11th ARWG meeting.

Draft ARWG Recommendations Section

Work Group Overview
The Adaptation and Response Work Group (ARWG) is chaired by the Secretary of the Maryland Department of Natural Resources with administrative support provided by Department staff. The ARWG and its members advance their work through the active involvement of and leadership from other work group members, agencies and stakeholders.

The ARWG and its members are actively implementing work on dozens of recommendations that have been adopted since the group began its early work nearly a decade ago. The ARWG members are squarely in implementation mode – working to ensure that a broad variety of Phase I and II Strategy recommendations about sea-level rise and climate impact are advancing[1].

The work group has relied upon and recommends continued collaboration and conversations with stakeholders to determine when, how and if implementation of adaptation measures move forward. The recommendations set forth below will continue to be guided and informed in this manner as they move forward.

Evaluating Adaptation Strategies and Supporting Local Partners

1. Evaluation of Adaptation Strategies
The ARWG proposes a 2018 review of its Phase I and II Comprehensive Strategy recommendations to identify progress on the existing suite of recommendations, update the most current actions, and highlight any gaps or needs that may exist on adaptation action. The ARWG recommends that this review guide 2018 priorities and that it be presented to the MCCC and other Commission work groups.

2. Regional Adaptation Meetings
The climate adaptation challenges facing local communities are as different as the communities themselves. The ARWG is proposing the use of regional meetings to understand and share priorities and assistance opportunities; support local partners in their own adaptation efforts; ensure data consistency across boundaries; and, identify future opportunities to incentivize local action.

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[1] Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change – Phase I: Sea-level rise and coastal storms (2008, http://climatechange.maryland.gov/reducing-marylands-vulnerability-to-climate-change-executive-summary/) and Phase II: Building societal, economic, and ecological resilience (2011, http://climatechange.maryland.gov/reducing-marylands-vulnerability-to-climate-change-phase-ii-executive-summary/)

The Workgroup recommends that the Maryland Commission on Climate Change, ARWG and other work groups provide scientific, technical, logistical and planning support for regional meetings to provide optional climate change adaptation planning assistance to local governments. The meetings may cover the development of geographically relevant (small-scale) forecasts of natural hazards worsened by climate change; factors to consider for making decisions on whether such forecasts necessitate changes in local emergency response, land use, health, floodplain and other programs, procedures and policies; best management practices to consider in climate change adaptation planning (including case studies of successful local government adaptation planning in Maryland and elsewhere); an overview of the existing data, tools and guidance available from the state to support adaptation planning; and the identification of incentives, financial resources, and other voluntary approaches for encouraging local adaptation planning. The audience for the regional meetings will include elected officials, government staff, businesses, and the public.

Implementing adaptation through partner networks and research

3. Engaging the Business and Engineering Communities
The ARWG acknowledges the importance of engaging with and seeking feedback of the business and engineering communities to achieve adaptation measures for both public and private sectors. The ARWG will seek input from theses communities to inform and implement adaptation strategies related to growth and infrastructure, natural resources and resource-based industries, financial and economic well being and human health.

4. Clarifying a Research Agenda
The academic and research communities in Maryland have much to offer the ARWG and its partners in terms of applied science, modeling and monitoring. The ARWG will seek to clarify some of the immediate and longer term research and monitoring needs most directly related to its Phase I and II adaptation[2] strategies. The work group seeks feedback and guidance from the Scientific and Technical Work Group (STWG) to help inform this process.

5. The ARWG recognizes that climate change affects both coastal and non-coastal communities, and that vulnerable populations exist across the State. The ARWG recognizes that an increasing amount of adaptation work is beginning to develop approaches to non-coastal populations and that this may involve different adaptation strategies focused on different threats. The work group proposes that the ARWG, MCCC and other partners understand, identify and communicate specific non-coastal strategies that will be addressed.

Natural Resources and Resource-Based Industries

6. Fostering Natural Resource and Resource-Based Industry Adaptation
One of the ARWG's climate challenges relates to Natural Resources and Resource-Based Industries that addresses both our natural environment as well as those industries – such as agriculture – that are resource-based. In 2016–2017, progress was made

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[2] Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change – Phase I: Sea-level rise and coastal storms (2008, http://climatechange.maryland.gov/reducing-marylands-vulnerability-to-climate-change-executive-summary/) and Phase II: Building societal, economic, and ecological resilience (2011, http://climatechange.maryland.gov/reducing-marylands-vulnerability-to-climate-change-phase-ii-executive-summary/)

establishing a Healthy Soils Consortium to address the role of agriculture and carbon sequestration. Recommendations related to this issue are jointly-referenced in the MWG and ARWG appendices and are as follows (*8/29/17):*

- An analysis should be undertaken to identify those practices appropriate to Maryland that increase soil health, as well as the co-benefits, including carbon sequestration, greenhouse gas mitigation, water quality improvement, ecological resilience, nutrient content, health impact, crop or animal yield, and economic profitability, of both current and additional practices.

- The MWG, in concert with the ARWG, supports incentivizing a menu of Best Management Practices that improve soil health. In addition, co-benefits should be considered when developing strategies and allocating new resources for existing and planned programs.

- A determination should be made of the tools and metrics available for use in quantifying the potential for carbon sequestration and greenhouse gas reduction that can be achieved through the adoption of healthy soil practices.

- A cross-agency inventory should be conducted of Maryland programs that could prioritize and incentivize healthy soil practices for all scales of farming, including the home gardener.

- Within their respective roles and charges, the MCCC and its four working groups should support the efforts of the Healthy Soils Consortium to inform Maryland farmers not only of the benefits of soil health, but also the programs and incentives that can be accessed to further the adoption of such practices

- The MWG and ARWG support the development of pilot and/or demonstration projects to test innovative soil health practices, monitor results over time, and provide educational site locations.

- The MWG will work with DNR, the University of Maryland, and the STWG to utilize NASA-sourced LiDAR technology and data to better estimate site-specific carbon sequestration from managing forests, planting forests, and increasing urban tree canopy.

- Alternative funding sources, such as RGGI, social/environmental impact bonds, or public/private partnerships, should be explored, and new funding, when available, should advance programs and practices that prioritize improved soil health.

Adaptation and Equity

7. The ARWG will continue to incorporate equity and environmental justice considerations into its implementation work addressing adaptation actions, including Phase I and II strategies for reducing vulnerability to climate change. The work group proposes that this may be accomplished by connecting with the Commission on Environmental Justice and Sustainable Communities (CESJC), and other health equity or environmental justice experts in the academic, research and community realms.

8. In 2018, the work group encourages the Department of Natural Resources and its inter-agency review team to understand and further clarify the types of vulnerable populations that would most benefit from coastal resiliency projects addressing climate impacts like sea level rise, flooding and erosion. Specifying climate impacts and affected populations would help to refine the geographic areas that would benefit from natural and nature-based shoreline stabilization and flood reduction projects. Such clarification about vulnerable and under-served populations would assist with project selection that will occur competitively based on (1) the vulnerability of the habitat and community; (2) targeted resiliency areas; (3) level of community engagement; (4) project readiness and status; and (5) broader ecosystem services.