

**Maryland Commission on Climate Change  
Adaptation & Response Working Group**

**DRAFT MEETING NOTES**

Date/ Time: Monday, December 3, 2018; 2-4 PM

Location: Maryland Department of Natural Resources  
580 Taylor Avenue, Annapolis, MD 21401

Purpose: This 2018 fourth quarter ARWG meeting will provide updates on a variety of ongoing adaptation efforts and Maryland-specific climate projections work. Feedback will be sought on 2019 priorities and work needed to inform the development of an ARWG 2019 work plan. The work plan will need to be drafted in the next quarter and approved during the 2019 first quarter meeting.

*Attendance:* Mark Belton (DNR); Nancy Kopp (MD Treasurer); Dave Guignet & Gary Setzer (MDE); Catherine McCall, Matt Fleming, Joseph Abe, Megan Granato, Sasha Land, Nicole Carlozo, Christine Conn, Jenn Raulin, Jackie Specht (DNR), Kate Charbonneau & Alexandra DeWeese (DNR/CAC); Allison Gost (MDH); Andrew Asgarali-Hoffman, JaLeesa Tate, Jihane Ambroise (MEMA); Jason Dubow, Debbie Herr Cornwell (MDP); Fredrika Moser (Maryland Sea Grant); Sandy Hertz, Elizabeth Habic (MDOT/SHA); Brian Ambrette (Eastern Shore Land Conservancy); Dave Nemazie (UMCES); Margie Brassil (MDGA); Emily Vainieri (OAG/DNR); Nell Ziehl, Steve Allen (MHT); Kevin Brown (Ocean City); Mary Phillips (Somerset County); Anna Johnson (Bayland Consultants & Designers); Spyros Papadimas (DGS); Joe Brennar (KCI); Eric Myers (The Conservation Fund); Drew Budelis (Versar); Susan Payne (MDA); Gail Kenson (NavFac)

*Conference Phone:* Jim George, Lisa Nissley (MDE)

2:03 pm Meeting Began

**I. Welcome, Introductions & Review of Agenda - Secretary Belton 2:00 – 2:10 pm**

Discussion: Seek approval of July 30th meeting notes.  
Materials: Meeting Agenda (Attachment A)  
[July 30, 2018 draft meeting notes](#)<sup>1</sup> (Attachment B)

- Secretary Belton provided welcome
- Introductions around the room
- 7/30 meeting notes approved

**II. Summary of MCCC 2018 Annual Report**

Discussion: Highlight adaptation-related recommendations and discuss implications for ARWG 2019 work plan priorities.  
Materials: MCCC 2018 Annual Report (Attachment C)

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<sup>1</sup> <https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/ARWG/ARWGMeetingNotes07302018.pdf>

- Catherine provided an overview of the [MCCC annual report](#) and highlighted the final ARWG-related recommendations - relating this work to a need to begin work on the 2019 work plan.
- Mark and Catherine highlighted the MCCC Minority Note (Chapter 5, p. 62) calling for stronger and more urgent focus on greenhouse gas reduction and adaptation action. Challenge presented to the ARWG members to consider what actions can and should be taken in 2019 to accelerate progress.

### III. **Coast Smart Legislation: Saltwater Intrusion & Nuisance Flooding**

Discussion: DNR and MDP staff will provide an update on progress being made on the legislative requirements for the state to develop a saltwater intrusion plan by December 15, 2019 and for local jurisdictions to develop nuisance flood plans by July 1, 2019.

Materials: [House Bill 1350](#)<sup>2</sup>  
[Senate Bill 1006](#)<sup>3</sup>

- Sasha Land provided an overview and update about work to address nuisance flood plans.
  - Since July, a nuisance flood plan work group has met three times to discuss guidance and assistance that could be provided to communities on the legislative requirements. This group has/will include local government representation, including Kent County, the City of Annapolis & others that will review draft guidance. The group intends to issue a guidance document in January that outlines a variety of ways that communities could address nuisance flooding - these might include amendments to existing plans or a stand-alone approach; the approach will be selected by the communities. Presentations and communication with MML and MACo communities occurred in Fall 2018 to discuss the requirements and the options for how communities might address this work.
- Jason Dubow provided an overview and update about work to address saltwater intrusion.
  - Since July, the saltwater intrusion group has taken a comprehensive approach to saltwater intrusion definitions/impacts to begin, discussing fresh/salt water marshes, coastal forests, aquatic/fish species, infrastructure (e.g. wells, septic), agriculture. The group will have an early draft by April 2019 addressing saltwater impacts that will begin an iterative review process (ARWG may have a review draft in Summer 2019). The group is seeking opportunities to continue the research and scoping phase of this work. Meetings with local governments, Critical Area Program are utility companies are upcoming.
- Membership discussion:
  - MEMA noted that there may be funding opportunities to delve into aquifer recharge mitigation opportunities.
  - ARWG members discussed future opportunities to exchange best practices at the regional scale and explore bridges between the academic/scientific community and managers.

### IV. **STWG Sea Level Rise Projections**

Discussion: UMCES will provide an update about the STWG's work to update Maryland-specific sea level rise projections. Opportunity for the ARWG to work closely with the STWG and ECO on the rollout of these projections (e.g. communication how new projections may impact local and statewide

<sup>2</sup> <http://mgaleg.maryland.gov/webmga/frmMain.aspx?stab=01&pid=billpage&tab=subject3&ys=2018rs&id=HB1350>

<sup>3</sup> <http://mgaleg.maryland.gov/webmga/frmMain.aspx?pid=billpage&tab=subject3&id=sb1006&stab=01&ys=2018RS>

decision-making). Discuss the need for updated maps that depict vulnerability (and connections to Coast Smart legislation) Discuss possibility/need for convening a workshop to determine appropriate mapping platforms and tools.

- Dave Nemazie (UMCES) provided an update about the STWG efforts to update sea level rise projections.
  - A regional climate science panel comprised of scientists from NJ, DE, VA gathered in October to review the projections and the report is currently getting final review.
  - The updated 2018 projections are based on probabilistic projections for greenhouse gas emissions pathways. The approach allows global science to be run through various scenarios to estimate potential ranges.
  - The ranges that will be issued (anticipated December 2018) have some adjustment options for jurisdictions further from the Baltimore tide gauge station - Annapolis, Solomons, Cambridge, Ocean City.
  - Projections will be shown for 2030, 2050, 2080, 2100, 2150. From 2080 on, there will be ranges presented for various emission scenarios. Draft (pending final STWG report publication) projections are: 2050, 1.1-2.4 ft increase; 2100, 1.2-3 ft increase; 2150, 1.8-4.2 ft increase.
  - The biggest unknown is what is occurring with Antarctica and landmass ice. There will be some information about projections of frequency of high tide flooding.
- The ARWG discussed collaboration needs for inundation maps as well as a need to communicate and/or address the changes in projects in this series of projections as some of the inundation levels will be lower than those published in 2013.

## V. **Hazard Mitigation through Restoration**

Discussion: MEMA and DNR staff will discuss a new FEMA job aid/funding opportunity to use hazard mitigation grant funding for restoration to build resilience. Staff will facilitate a discussion about collaboration opportunities and an approach for connecting restoration-focused resilience efforts across Maryland's landscapes.

- JaLeesa Tate provided an overview of a recent FEMA Job Aid that could include opportunities to use natural features for future risk.
  - FEMA started to discuss how to include bioengineering and restoration in the hazard mitigation funding applications. MEMA is beginning to look at how to move away from the single home elevations.
  - Seeking partnerships with state agencies or partners to understand the local priorities and projects that might work and identify ways to build capacity or subject matter expertise at the local level.
  - Design and engineering must be done up to a certain level. The costs are reimbursable, so there are risks that if the project is not funded, the community would foot that bill with no implementation funds.
- Discussion: a need to prepare Maryland and its community to take advantage of upcoming funding opportunities (e.g. FEMA, NOAA, USACE) that use natural infrastructure for resilience; 2010 trust fund model to align funds and assistance and design opportunities; several ARWG members will meet to discuss landscape-level needs for NNBFF project identification so that Maryland is better situated to compete for future funding, including the FEMA Job Aid.

## VI. **Environmental Public Health Adaptation Tracker -**

Discussion: MDH staff will provide an update on the effort to track progress on climate change adaptation in the public health sector through the Environmental Public Health Adaptation Tracker (EPHCAT).

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- Allison Gost provided an update on the climate adaptation tracker.
- MDH is looking for feedback about the database and the map to display adaptation work.
- An example is DOE What Works clearinghouse - to show effectiveness tracking
- A survey was distributed and will be sent to ARWG members electronically

## VII. **2019 Work Plan, Adaptation Priorities, Cross-Issues Discussion**

Discussion: Discuss items and issues to be prioritized for 2019 discussion, prioritization and work plan development. Seek feedback about connection points with STWG, MGW, ECO, as well as other outside entities. Discuss how the ARWG wants to consider emerging issues (e.g. adaptive retreat, inland flooding, restoration/resilience, support of members' adaptation work, etc.)

- Catherine provided an overview of the annual report recommendations, reminded the group about the existing adaptation strategy review and called for membership to provide ideas for 2019 discussion and action, include decisive new action on emerging issues that members wanted to explore.

ARWG membership provided the following ideas. Where individuals noted they wanted to begin initial discussion, names are included. Where names are not included, ARWG staff will cross compare these ideas with the strategy review and begin conversations across the membership in advance of the 2019 Q1 meeting to identify next steps:

- Regional meeting follow up from 2017 MCCC report (exchanges or regional scale)
- GCC - higher standards for Floodplain Management. Guidance or higher standards practice examples to explain what those standards are and what they could achieve
- Conowingo; continued dredging needs to maintain port access. Incorporation of innovative/beneficial use of material for adaptation benefits
- Alignment of funding and technical assistance
- Creation of mapping products and communicating their application
- MidA exchange (e.g. State of the Coast) to share adaptation best practices
- Messaging and outreach; addressing what we can do today for tomorrow's impacts or how the improvement today helps improve future outcomes
- Assessment of structural change - e.g. regulations or planning. Variety of scales.
- Freight/rail (e.g. extreme heat on rails) - economic viability in and across the state and during extreme events
- Minority report
- Estimating precipitation event changes - stormwater design
- Washington DC downscaled precipitation - pending ESLC study for Eastern Shore (Megan Granato, Elizabeth Habic, Brian Ambrette)
- Financial resiliency, those living just outside 100 year floodplain. Increase in all hazard insurance coverage. Education of realtors regarding hazards
- Bay WIP climate screening in work plan - once implemented review the commitments
- Pilot Living Shoreline project (cost for reduction, Jim George to send)
- Adaptive retreat - Critical Area Dorchester conversation, transfer to a regional scale
- STWG coordination and agenda items for 2019 (Dave Nemazie); MWG-ARWG coordination (e.g. dam safety)
- Alignment amongst/across local governments - planning across jurisdictions/watersheds

- Considering that floods include rivers, lakes, flash floods, coastal floods, storm surges and tsunamis, investigate adaptation approaches in terms of watersheds and associated coastal zones rather than administrative/political boundaries. Furthermore, coordinate and synchronize floods with water quality and develop a common implementation strategy.

#### VIII. **Updates, Meeting Recap & Next Steps**

Discussion: [Chesapeake Bay Sentinel Site Cooperative Marsh Resilience Summit](#)  
(*Fredricka Moser*) - February 5 & 6

Maryland Climate Leadership Academy

2019 meeting dates, *tentative schedule*

February 25

May 20

August 5

November 18

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