

July 30, 2018 Draft Meeting Notes

Maryland Coast Smart Council

11:00am – 12:00pm

Maryland Commission on Climate Change Adaptation and Response Working Group

12:30pm – 2:00pm

Tawes State Office Building

Conference Room C-1

580 Taylor Ave

Annapolis, MD 21401

Attendance: Mark Belton (DNR), Ben Grumbles (MDE), Nancy Kopp (MD Treasurer), Shiela McDonald (BPW), Paul Pinsky (MD Senator), Dana Stein (MD Delegate), Gary Setzer (MDE), Matt Fleming (DNR) Dave Guignet (MDE), Catherine McCall (DNR), Joseph Abe (DNR), Kim Hernandez (DNR), Kate Charbonneau (DNR/CAC), Alexandra DeWeese (DNR/CAC), Allison Gost (MDH), Andrew Asgarali-Hoffman (MEMA), Astrid Caldas (Union of Concerned Scientists), Brian Ambrette (Eastern Shore Land Conservancy), Chas Eby (MEMA), Chris Elcock (GWWO), Dave Nemazie (UMCES), Peter Goodwin (UMCES), David Andreasen (DNR/MGS), David Bohannon (BPW), Debbie Herr Cornwell (MDP), Drew Budelis (Versar), Elizabeth Habic (MDOT/SHA), Emily Vainieri (OAG/DNR), Fredrika Moser (Maryland Sea Grant), Gerald Galloway (UMD-College Park), Jackie Specht (DNR), JaLeesa Tate (MEMA), Jason Dubow, Jennifer Raulin (DNR), Jill Lemke (MD Port Administration), Jim George (MDE), John Brush (DGS), Kevin Brown (Ocean City), Lisa Nissley (MDE), Margie Brassil (MDGA), Mary Phillips (Somerset County), Megan Granato (DNR), Michael Bayer (MDP), Nicole Carlozo (DNR), Richard Higgins (Commerce), Zoe Johnson (DoD), Ian Ullman (Sen. Pinsky), Sam Kahl (MDOT/SHA), Lowell Brazin (MDOT/SHA), Hannah Brubach (MDE), Paola Ariza (MTA), Susanne Biloghn (?), Nick Kelly (DNR/CAC), Charlotte, Shearin (DNR/CAC), Dorothy Morrison (MDOT), Walt Zalis (Energetics), Tom Perrot (Energetics)

Conference Phone: Angelica Bailey (Maryland Building Industry Association), Fiona Burns (DBM), Kevin Wagner (MDE)

11:03 am Meeting Began

Agenda Item #1: Welcome and Announcements

- Secretary Belton provided welcome
- Introductions around the room

Agenda Item #2: Discussion of SB 1006 (HB 1350) – Sea Level Rise Inundation and Coastal Flooding – Construction, Adaptation, and Mitigation

- Powerpoint presentation by Sasha Land
 - New title for legislation is *Sea Level Rise Inundation and Coastal Flooding*
 - Bill was passed by the General Assembly in 2018, signed by Governor Hogan in late May, and went into effect July 1
 - An overview was provided for Parts I through VI (*notes can be provided if needed*)
- Context setting by Senator Pinsky and Delegate Stein
 - The delegate and senator have participated in mitigation discussions through the Maryland Commission on Climate Change (MCCC) and thought that additional coordination is needed on mitigation actions
 - Two Washington Post articles that were provided to the Council and specific quotes read. The news articles and issues faced by local communities, including Crisfield and Hampton Roads, were credited with driving forward the legislation.

Agenda Item #3: Q&A and Discussion

- Application of the funding criteria
 - Secretary Belton: Does the funding criteria apply to all projects or capital projects?
 - Answer: The intent was that it applies to capital projects – structures or highway facilities
- Structure definition
 - Secretary Belton: The word “structure” can be nebulous. Examples of structures funded through the Trust Fund were given.
 - Answer: We can refine our thoughts of “structure.” The definition of “structure” is provided. If needed, the legislation can be revised to state that they are capital structures.
- Nuisance flooding plan comments – They had a long back and forth with MACO, and wanted to provide a starting point to get jurisdictions thinking about nuisance flooding. They did not provide set criteria or elements that each plan must address, as it should be tailored to each locality. If there is foot dragging, they may have to add criteria in 5 or 8 years.
- Jason Dubow (MDP): State level guidance might be needed to help inform the jurisdictions.
- Sheila McDonald (Board of Public Works): Board of Public Works will act as coordinator for the state mitigation work, and recognize that the other agencies will provide substance
- Matt Fleming (DNR): The maps referenced reflect state agency data. We have the in-house capabilities to expand tools and make them more user friendly. We also have the ability to combine SLR and category 2 storm surge, and will begin to develop this for local governments. Training can be provided through the Maryland Climate Leadership Academy.
- Treasurer Kopp: The work to be done as a result of this legislation will help to build up a framework for everyone to be more aware of diversity of players and similarities in goals on these issues – we are not different teams. It is normal for bills such as these, which will be integrated across agencies, to require discussion. Someone from capital/operating budget should be involved (*it was confirmed that Fiona Burns from DBM was participating on the phone*).
- Secretary Grumbles (MDE): This is a tremendous opportunity for creativity on adaptation through Secretary Belton’s leadership and key players on CSC. The MDE standpoint is planning, infrastructure, and regulation. Programs speak to this need. The key is to develop collaborative criteria that is science based and achievable, and then integrate it into various programs at state and local levels. Climate change is water change, and on October 10 the state is hosting workshop with Israel on water reuse, water supply, subsidence, and security issues. This is an example of how the state is recognizing that future is water.

Non-Agenda Item – Head Start on first item of Adaptation & Response Working Group Meeting

Review of key actions and next steps for Part III – Coast Smart Design and Siting Criteria – by Joe Abe

- Prior to the bill, the reference point for vulnerability was based on location within the special flood hazard area (SFHA), areas prone to 100-year floods. This is the standard reference for the National Flood Insurance Program (NFIP). Maryland’s Coast Smart guidelines require that the first floor elevation of structures within a SFHA be at least 2 feet of above the 100-year base flood elevation. The additional 2 feet safety factor is commonly known as freeboard. The legislation apparently intends to set a more aggressive reference for vulnerability assessment. Abe requested that Dave Guignet weigh in on the situation.
- Discussion on setting new design standards
 - Dave Guignet (state NFIP coordinator, MDE): We need to consider what information is available to us. Map updates occur frequently – we now have 1 ft DEMs, used to be 2-4 ft DEMs. Floodplains can be defined multiple ways based on what data is used. The category 2 storm level is a 15 ft topo gradient that hasn’t been updated in many years. Floodplain regulations are more up to date. Combining category 2 storms with floodplain regulations is like combining apples and oranges.

- Senator Pinsky: They don't want us to invest time and money in the category 2 storm layer if it is outdated. They want to get the criteria right and are open to input on defining the new standard. They want storm surge and SLR to be considered together but a different framework could be used and the language can be cleaned up. Don Boesch and others advised them to focus on category 2 storm impacts because category 2 storms are likely to hit the eastern shore.
- Peter Goodwin (UMCES): This is a good opportunity for the science community to help define the new standard. Flooding impacts are not simple, and depend on many factors and preceding conditions.
- Gerald Galloway (UMD) pointed out that state of Illinois had found that 90% of urban flood losses were outside of the 100 year floodplain. The Commission to Rebuild Texas (after Harvey) is using Maryland documents on coastal activity standards and looking to our state for advice.
- Dave Guignet (MDE): Sizing everything on 100 year storms and adding in a factor of safety makes this an apples to apples comparison, as opposed to having to focus on category 2 storms
- Secretary Belton: a workgroup should be convened to work on these issues further
 - Available tools
 - Brian Ambrette (ESLC): He is working with 5 communities on the eastern shore to develop sea level rise scenario maps that include the 100 year storm and damage predictions to addressable structures, which should be completed in the next few months.
 - Astrid Caldas (Union of Concerned Scientists): She agrees that it is a useful exercise to overlay storm surge and SLR, and the UOCS has done so for Annapolis.
 - Elizabeth Habic (MDOT SHA): SHA has statewide maps for projected sea level rise (2050 and 2100) and storm impacts ranging from the 10 to 500 year storm. These have been added to their viewer in the last few months.
 - Chas Eby (MEMA): MEMA and US Army Corps of Engineers are working on a feasibility study for storm evacuation, which may have data that would be useful to this effort
 - Dave Nemazie (UMCES): UMCES is charged with developing new SLR projections past 2100 and will be meeting with experts in October. He will provide an update in the next meeting.
- Catherine McCall (DNR): The next meeting until December, so it would be helpful to identify members willing to discuss mapping criteria and range in the meantime.
 - Sandy Hertz (MDOT)
 - Elizabeth Habic (MDOT SHA)
 - Chas Eby (MEMA)
 - Dave Guignet (MDE)
 - Dave Nemazie (UMCES)

12:00 pm: Meeting adjourned and participants were invited to lunch.

**Maryland Commission on Climate Change
Adaptation and Response Working Group
July 30, 2018
12:30pm – 2:00pm**

Tawes State Office Building
Conference Room C-1
580 Taylor Ave
Annapolis, MD 21401

Materials: Meeting Agenda
[May 7, 2018 draft meeting notes](#)¹
[House Bill 1350](#)²
[Senate Bill 1006](#)³

Attendance: Mark Belton (DNR), Ben Grumbles (MDE), Nancy Kopp (MD Treasurer), Shiela McDonald (BPW), Paul Pinsky (MD Senator), Dana Stein (MD Delegate), Gary Setzer (MDE), Matt Fleming (DNR) Dave Guignet (MDE), Catherine McCall (DNR), Joseph Abe (DNR), Kim Hernandez (DNR), Kate Charbonneau (DNR/CAC), Alexandra DeWeese (DNR/CAC), Allison Gost (MDH), Andrew Asgarali-Hoffman (MEMA), Astrid Caldas (Union of Concerned Scientists), Brian Ambrette (Eastern Shore Land Conservancy), Chas Eby (MEMA), Chris Elcock (GWWO), Dave Nemazie (UMCES), Peter Goodwin (UMCES), David Andreasen (DNR/MGS), David Bohannon (BPW), Debbie Herr Cornwell (MDP), Drew Budelis (Versar), Elizabeth Habic (MDOT/SHA), Emily Vainieri (OAG/DNR), Fredrika Moser (Maryland Sea Grant), Gerald Galloway (UMD-College Park), Jackie Specht (DNR), JaLeesa Tate (MEMA), Jason Dubow, Jennifer Raulin (DNR), Jill Lemke (MD Port Administration), Jim George (MDE), John Brush (DGS), Kevin Brown (Ocean City), Lisa Nissley (MDE), Margie Brassil (MDGA), Mary Phillips (Somerset County), Megan Granato (DNR), Michael Bayer (MDP), Nicole Carlozo (DNR), Richard Higgins (Commerce), Zoe Johnson (DoD), Ian Ullman (Sen. Pinsky), Sam Kahl (MDOT/SHA), Lowell Brazin (MDOT/SHA), Hannah Brubach (MDE), Paola Ariza (MTA), Susanne Biloghn (?), Nick Kelly (DNR/CAC), Charlotte, Shearin (DNR/CAC), Dorothy Morrison (MDOT), Walt Zalis (Energetics), Tom Perrot (Energetics)

Conference Phone: Angelica Bailey (Maryland Building Industry Association), Fiona Burns (DBM), Kevin Wagner (MDE)

12:35 PM Meeting Began

Agenda Item #1: Welcome, Introductions, and Review of Agenda

- Welcome and overview from Secretary Belton
 - One of the meeting goals is to come up with recommendations for annual report
 - Approval of minutes from last meeting – Susan Payne and Jason Dubow
 - Introduction of special guests – Treasurer Kopp, Secretary Grumbles
 - Introductions around the room
- Recap of preceding CSC meeting by Joe Abe (DNR)
 - The meeting started with an overview of the intent of the legislation
 - We gained a sense of spirit of what is to be accomplished
 - The senator and delegate want us to look at multiple impacts (SLR and storm surge) and move towards a more stringent standard than the 100 year flood
 - The plan was made to assemble a technical workgroup
 - The intent of this meeting is to move onto other aspects of the legislation, including saltwater intrusion

¹ <http://mde.maryland.gov/programs/Air/ClimateChange/MCCC/ARWG/ARWGNNotes05072018.pdf>

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

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

Agenda Item #2: Overview and Facilitated Discussion of HB 1350/SB 1006

- Review of Part IV - Saltwater Intrusion (SI)– by Jason Dubow (MDP)
 - A workgroup has already been formed
 - The impacts to address are diverse and include impacts on both agriculture and forests
 - They need to not only consider the impacts of groundwater up, but also surface water moving down through inundation
 - The workgroup has been trying to develop the scope of the plan. They decided to focus on what we know and what we don't know about the issue (including horizontal and vertical impacts) and try to visualize the impacts.
 - Delegate Stein: Future impacts should also be forecasted
 - The bill requires that state agencies develop SI plan by December 15, 2019 and update it every five years
 - Key questions
 - What existing data and studies are available on spatial extent of current and potential SI (surface water, soils and aquifers) in MD? Meeting attendees are requested to submit any studies they know of that could inform this effort.
 - What form should the SI plan have (paper copy, website, app)? The workgroup wants to be able to focus on visualizations and don't want the plan to be a static document. The plan could include an app for citizen science. Who will be using the plan and what form would they like it in?
 - Secretary Belton: Who in local government is dealing with this issue?
 - Local environmental health staff that review well monitoring data
 - The workgroup is at the state level at this point, and should reach out to these types of constituents
 - Maybe also include DNR park managers, agricultural representatives, etc.
 - MDP to report progress at quarterly ARWG meetings
 - Potential resources
 - Brian Ambrette (ESLC): The local farm bureaus could be a good resource.
 - Treasurer Kopp: She was disappointed by the presentation by the insurance industry representatives at the last meeting. They are investing in places where SI is an issue and may have resources.
 - Fredrika Moser: Research on the eastern shore is in progress.
 - Secretary Belton: We can engage UMCES and UMD to help get research done to move forward on these topics, could be a recommendation of the plan.
 - Elizabeth Habic (MDOT SHA): There is work on SI from the Florida Everglades.
 - Question from Chas Eby (MEMA): Is the plan to adapt to SI and provide BMPs once the extent is known, or to avoid it?
 - Secretary Grumbles: Orange County, California has the issue of a salt wedge moving inland. They developed a public works program to inject highly treated, reclaimed wastewater into the aquifer. The SI plan should not only focus on risk and extent but also think about water management strategies and technologies to mitigate impact. This was a driver for the Hampton Roads project.
 - Limiting SI and adapting to SI could be the two focal points of the plan
 - Road salt discussion
 - Secretary Grumbles: The focus on SI is based on intrusion, but we also need to think about saltwater pollution impacts. Road salts are a growing concern and problem related to extreme weather.
 - Treasurer Kopp: What are the impacts to the salinity of the Bay?
 - If road salt increases the concentration to surface water it should be included in the plan as it has triggered the definition of SI in the bill.

- Sandy Hertz (MDOT): MDOT has looked into impacts of road salt on surface water and landowners, and someone involved in that work should participate in the SI workgroup.
 - Delegate Stein’s legislative director: The bill focuses on SLR, not road salt. Road salt is a departure from the issue the bill was meant to address.
 - Secretary Grumbles: Agreed, this is an MCCC issue, not necessarily something to be addressed through this effort.
 - Secretary Belton: Clarification - SI related to SLR will be the focus of this work
 - Rich Ortt (DNR): If road salt is looked at in the future we should also look at water softeners.
- Review of Part V – State Mitigation
 - Sheila McDonald (Board of Public Works): This part establishes criteria to evaluate whether state funds should be used to mitigate these hazards. Are there state funds in existence that board will be evaluating the use of for this purpose? Or will this be an evaluation of new projects with a checklist of flooding issues addressed?
 - Sandy Hertz (MDOT): Their work is often coupled together with mitigation – does this legislation require approval for mitigation work that they are required to do?
 - Emily Vanieri (DNR): CSC checklist needs to be updated based on legislation
 - Secretary Belton: A work group needs to review checklist and adapt it
 - Sasha Land (DNR): Delegate Stein gave a list of types of projects (sea walls, shoreline, etc.) that aren’t necessary typical capital projects. Things are going in two separate directions. The checklist may need to be more encompassing than capital projects.
 - Susan Payne (MDA): We need to include reconstruction as well.
- Review of Part VI – Nuisance Flooding
 - What is considered an inconvenience? That is a local issue, not state level
 - Sasha Land (DNR): Nuisance flooding is also caused by precipitation, not just tides.
 - Secretary Belton: Do the representatives from local governments have input?
 - Dennis Dare (Ocean City): Flooding is not new. The City engineer is looking into what to do but funding is short as are grants. He has recommended they build structures higher, but that doesn’t answer nuisance flooding issue. If you build up higher, you can hopefully build the land up higher (extreme cost), and then build up roads. Seacrets on 48th St is an example that building up eliminated the problem, as is work done on 63rd St.
 - Secretary Belton: How can we help varying range of problems local governments will face? Website with local ordinances, BMPs, etc?
 - Sasha Land (DNR): This builds off of work CCS has been doing. We can put together resources but need to bring in local perspectives. The takeaway from this morning is that this is an awareness piece – how are jurisdictions planning for these impacts? Comprehensive plans? Other plans?
 - Secretary Belton: Is MDP planning outreach?
 - Jason Dubow (MDP): It is up in the air on who will take the lead, makes most sense to be DNR. *DNR (CCS) has since committed to being the lead.
 - Secretary Belton: We want to be able to provide tools to local governments to meet this requirement, not “pick on” them. This is an unfunded mandate. We can put together a list of tools available and ask what additional tools are needed, and engage MML and MACO as well.
 - Brian Ambrette (ESLC): He has started to put together a guidance document for nuisance flooding that will walk the user through the planning process from the hazard POI and include templates for the hazard mitigation plan or comprehensive plan. Documentation of where nuisance flooding is happening is important.
 - Elizabeth Habic (MDOT SHA): We could provide maps that include depths that local governments could use to identify problem areas in different scenarios.
 - Jason Dubow (MDP): Mapping this type of issue is going to be extremely difficult as nuisance flooding is going to be based, in part, by preceding conditions.

- Secretary Belton: We should provide tools that jurisdictions can use themselves to identify problem areas, not identify them for them
- Sandy Hertz (MDOT): If public inconvenience is part of the definition, do we need to define what that is?
 - Secretary Belton: We don't want to tell local governments what to do or not do
 - Sandy Hertz (MDOT): It is too broad now
 - MDE: It is too easy for local governments to take a pass because they claim they aren't inconvenienced by flooding
 - Brian Ambrette (ESLC): We are still focusing on questions like whether to include precipitation and haven't gotten to defining the range of what nuisance flooding is. What is threshold to more serious flooding?
 - Astrid Caldas (Union of Concerned Scientists): There are high tide flooding area maps with projections starting in 2030 at the street level for coastal flooding that have been ground truthed.
 - Matt Fleming (DNR): The delegate mentioned Ellicott City as part of the driver for this, but we have only been discussing coastal impacts. The legislation is focused on high tide. Precipitation induced flooding should be covered by HMP.

Agenda Item #3: 2018 MCCC Annual Report Recommendations

- First draft is due first week of September
- Recommended items:
 - Saltwater intrusion
 - State mitigation
 - Nuisance flooding
 - Public health – Alison Gost (MDPH)
 - MDPH is trying to reinvigorate the public health component of recommendations and workgroup to help tease out public health components. Anyone interested is welcome to send ideas or volunteer to help with this work.
 - The Climate and Public Health Adaptation Tracker will be live this fall.
 - It includes anything encompassing climate change adaptations that have a health component. Content is georeferenced with map links for highlights/case studies (ex – basement flooding in Baltimore, asthma in Kent County). It also shows health benefits of adaptation actions.
 - Secretary Grumbles: Close coordination needed for its rollout, and potential impacts to communities also need to be considered (blemishing communities, devaluing properties).
 - Alison Gost (MDPH): They are working through this issue with another tool and will apply those lessons here.
 - Astrid Caldas (Union of Concerned Scientists): The tool could also link to the mitigation work group to show how issues are being addressed
- Phase III WIP
- Regional Adaptation Meetings
- Strategic planning for 2019 and beyond
 - Current plan covers 2017 and 2018
 - The group will start discussing the 2019 plan in December meeting
 - A recommendation from the last report was to look at action strategies from 2011 to see how we have progressed
 - We will need help sorting through the table of 2011 strategies. Please think about what has been done and what we need to do differently in the future.
 - Should we have small topic teams to push important issues forward?
 - Brian Ambrette (ESLC): Should we add previous ARWG recommendations to the table?

- Is the work group okay with refining these recommendations via email? Yes
- Secretary Grumbles: The recommendations look like they strike a good balance
- Susan Payne (MDA): The Healthy Soils initiative is cross-sectoral and should remain on the list

Agenda Item #4: Meeting Recap, Updates and Next Steps

- Sasha Land (DNR) to report back in October on SLR projection updates.
- Climate Leadership Academy – The Academy was launched in May after 1.5 years of planning. The hope is to have the first cohort this fall. The steering committee includes members of the MCCC and external experts and is meeting on Friday. ARWG members will be involved in the future.
- Emily Vanieri: If there is anything that may result in potential legislative change, please involve her sooner than later.

1:55 PM Meeting Adjourned

