CSN Climate White Paper Feedback:

Coastal Plain Workshop:

Steering Committee (confirmed):

- KC Filippino (HRPDC)
- Elaine Webb (DNREC)
- Christina Lyerly (MDE)
- Alexandra DeWeese (MD DNR)
- Barbara Gavin (ERP)
- Jim Milliken (Virginia Beach)
- Liz Scheessele (Timmons)

White Paper:

Based on November polling, the priorities to advance:

- Option 7: Decision Support Tool to Choose Optimum Design Storm
- Option 1: Most Vulnerable Neighborhoods
    - Ideally the final concept for this tool includes elements of MVMA, MVP and MVH
- Option 6: Update Local Stormwater Design Specs
- Option 9: Codes and Ordinances Resilience Check-up

Notes on Priorities:

Options 7has fairly wide consensus. There is also a potential partner with RAND/MARISA who has expressed interest in this work.

Option 1 is also solid, it just is a matter of scoping – how much do we pull in from the other options to make the tool useful without being unwieldy.

Option 9 was a higher priority for local gov respondents than for the USWG membership as a whole.

Option 6 is the most polarizing. Some really want it, others really don't. Based on some follow-up feedback after the meeting, perhaps it is work that is supported but needs re-framing to avoid the regulatory connotation. There is general interest in advancing better plumbing (safe conveyance and better inlets), performance enhancers (soil amendments, and slow release), and better maintenance benchmarks.

Post Meeting Feedback:

Provided via newspaper editorial rules: "comments have been consolidated and lightly edited for conciseness and clarity".

DE:

- Fully supportive of the top options from polling

WV:

- Supportive of the MVN's and would like to see MVP's and MVH's built into the work or shipped to the Habitat GIT to pursue.
- Local design specs mat not get much use in WV at this time, but it would be wonderful to hear which BMPs or aspects of BMPs should be avoided or prioritized. State specs are also unlikely at this time.
- Codes and Ordinances checkup would be great, but may need to be preceded by basics training. WV floodplain managers are probably not ready yet for adapting to precip changes.

MD:

Since we ran out of time for discussion at the USWG meeting, I wanted to send you a follow-up email regarding the options to promote urban watershed resilience in Chesapeake Bay communities. Before I review MDE's thoughts on some of the options, Maryland's recent legislation will provide some context. Maryland's Stormwater Law was updated last year and became effective June 1 of this year. It requires MDE to report on the most recent precipitation data available, investigate flooding events since 2000, and update Maryland's stormwater quantity management standards for flood control. MDE was required to submit plans to update standards by November 1st, which it did under the document: Advancing Stormwater Resiliency in Maryland (A-StoRM) – Maryland's Stormwater Management Climate Action Plan (https://mde.maryland.gov/Documents/A-StorRMreport.pdf).

For reporting on the most recent precipitation data available, MDE looked at the 2006 NOAA Atlas 14 with record data through 2000, upcoming efforts to update the Atlas 14 precipitation data; and the MARISA forecasts. In regards to investigating flooding, MDE plans to work with local jurisdictions to more consistently define flooding events, and will work with localities and multiple state agencies to gather existing flood event data. This will be used to help characterize local stormwater quantity management requirements, stormwater infrastructure BMPs, and conveyance systems.

The regulation updates that may be considered include an increase in the use of green infrastructure, requiring peak flow management and/or creating standards for the safe conveyance of the 100 year storm in watersheds with historic flooding (since 2000), and requiring state and federal agencies to develop watershed studies for areas with flooding. The agencies along with local jurisdictions would use these studies to implement watershed-specific flood management plans. Other possible regulation could be updating existing local flood management plans to include current and future land use and precipitation data.

Of the nine resiliency options, we rated the Most Vulnerable Neighborhoods as the highest priority, which appears to align with the overall USWG top 3 choices. Protecting local communities is a critical and urgent need and the resulting information would help local planning and infrastructure agencies target resources and make decisions. It aligns with Maryland's Climate Action Plan, and can overlap with environmental justice initiatives.

We also rated the Decision Support Tool to Choose Optimum Design Storms to Manage Different Local Infrastructure Assets highly, which aligns with both the overall USWG and local government top 3s. Maryland local jurisdictions have more flexibility in tailoring their design storms based on local flooding issues than deviating from individual BMP design requirements found in Maryland's Stormwater Design Manual. Some jurisdictions already require greater management based on known local flooding problems. A decision support tool would be a great resource and could have near term benefits.

The lack of local jurisdictions' ability to deviate from the Design Manual is the reason that we rated Updating Local Stormwater Design Specs to Promote Practice Resiliency as not a priority. Heather Gewandter was spot on in her comments at the USWG meeting. Updating the design specs is overdue, but depending on what the Bay Program's design specs ultimately are, Maryland jurisdictions may or may not have the flexibility or regulatory teeth to adopt and require these locally until our State Design Manual is updated. So while updating the State Stormwater Design Manual is a priority for Maryland, we rated local design specs from CBP as not a priority due to local constraints.

Similarly, MDE rated a Statewide Climate-Informed Stormwater Design Supplement as not a priority. This work is currently moving forward in Maryland as part of the recent state legislation requiring MDE to develop the Stormwater Management Climate Action Plan, which includes updating Maryland's stormwater quantity management standards for flood control. There is an expectation that new regulations would be adopted by 2023. The legislation requires MDE to consult stakeholders with relevant expertise, which would include the Chesapeake Bay Program, but the climate action plan would be implemented outside of the Bay Program framework.

MDE rated Resiliency Checkup: Review of Local Code and Ordinances as a 5-year goal. While this made it to the local government top 3, this is another instance of state-led versus locally led changes. Taking flooding into consideration for local planning decisions is certainly important, and updated ordinances would be helpful for ensuring specific criteria are followed. However, we thought this could be a longer term goal because if Maryland updates its regulations, it is a good possibility that local ordinances will need to be revised as a result. For efficiency, we thought it made sense to start with state regs. We also expect that jurisdictions are already taking flooding into account when planning development.

MDE's last highly rated option is Most Vulnerable Ponds, which I understand may be dropped off the list. This option aligns well with MDE's current priorities. The Stormwater Program Review Division that administers the MS4 permits and our Dam Safety Inspections and Permitting Divisions are under the same program: Stormwater, Dam Safety, and Flood Management. We have made information sharing and division cross-over issues a priority, and in my division we have been paying greater attention to the conditions of MD Pond Code 378 ponds.

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I spoke with my colleagues on your follow up questions to gather some collective thoughts. We want to zoom out to look at the bigger picture. As we consider stormwater management, it is important to take a watershed approach and focus on the specific needs of the watershed. For example, determining what models should be used where, what data is needed to use the models, and what jurisdictions have that data would be particularly useful.

In addition, Maryland's stormwater program would place a higher priority on better standards for capturing runoff and getting it to stormwater practices and safe conveyance of runoff rather than developing new design specifications for SWM BMPs. We would like to see improvements in capturing runoff through techniques like soil decompaction, interception and delay, adequately conveying runoff (pipes, culverts, channels), adequately analyzing runoff overflow paths, and by ensuring the inlets to our practices are more than adequately designed. We see that a lot of the problem with individual facilities is proper construction and maintenance vs. the design itself. In addition, slow release needs to be considered more to ensure stable conveyance to the outfall and to focus on what happens to the runoff after it leaves the practice.

District of Columbia

Option 6 is personally among my top concerns from the list. I see some great opportunity for synergy there.

The District is perpetually concerned with vulnerable neighborhoods per Option 1, especially given some of the areas most likely to flood in the District are in highly sensitive communities. We are doing a lot in that space, but it would be interesting to see what other states are coming up with - especially in the demographic and income characteristics.

As far as the modeling goes, we are actually close to awarding a contract for the Integrated Flood Model which is specifically designed to map these areas of flooding that are outside the floodplain (including surveying / new H&H modeling). It will be over the next few years that we get results from this.

DOEE may not find as much to do with Option 7, but not saying it isn't important too! Some of my colleagues at the DC Department of General Services and the District Department of Transportation might find option 7 useful given they do a lot of asset management. Those findings could also inform the work of other teams in our office with some of our LID retrofits and stream restorations. Perhaps even our baseline assumptions on the longevity of urban LIDs that are installed for our stormwater management regulations for new development.

Admittedly we're unique among other jurisdictions in that we're entirely urban and therefore don't have much undeveloped land or ponds, which is why other options aren't as pressing to us (though still important of course!). If I had freedom to select any three, I might replace Option 7 with Option 4 on Vulnerable Habitats. Though a lot of habitat in the District is on federal land, we've got some habitat we care deeply about along the Anacostia River and other areas that we want to protect.

Virginia

We have to initiate a rulemaking by July 1st to deal with climate change/resiliency in our stormwater regulations.