Climate Resiliency Workgroup

June 29, 2022

1:30-3:30 PM EST

Join by Webinar:
https://umces.webex.com/umces/j.php?MTID=mc82d075ad9565badbc555f9bb05754fc
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Event webpage:
https://www.chesapeakebay.net/what/event/climate_resiliency_workgroup_meeting_june_2022
This meeting will be recorded for internal use to assure the accuracy of meeting notes.

Minutes

Action Items

- LGAC Forum: Connect Jessica Rodriguez and Nora Jackson with Jennifer Starr to discuss and/or assist with the resiliency plans for the forum
- GIT-Funded Project Steering Committee: Connect with Kristin Saunders on potential steering committee members who work within the land trust community/space
- Climate Directive Workplan: Request Bo Williams forward the CRWG the most recent draft of the workplan

1:30 PM Welcome and Meeting Overview- Coordinator Julie Reichert-Nguyen (NOAA)

Focus of meeting:

- Share takeaways from the recent U.S. EPA's Resilient Coastal Wetlands and Communities Multi-Regional workshop
- Share updates on workgroup supported projects and Chesapeake Bay Program's (CBP) activities:
    - Draft recommendations from the Rising Water Temperatures STAC Workshop
        - Seeking feedback from the Climate Resiliency Workgroup (CRWG) on draft recommendations related to where the

CRWG's expertise could support forward movement of actions.

- STAR/Climate Resiliency Workgroup's GIT-funded project, "Partnership-Building and Identification of Collaborative Tidal Marsh Adaptation Projects," hereafter "Marsh Adaptation Project"
  - Seeking CRWG members and interested parties help in identifying whether their organizations are involved in planning or implementing tidal wetland/marsh restoration projects and/or marsh resilience research, or know of other organizations working in this space.
- Chesapeake Bay Program's Climate Change Directive Draft Workplan
  - Informational presentation to raise awareness of this Chesapeake Bay Program's high-level planning effort. Note that this workplan is different from the CRWG's workplan; however, components of our workplan can support this higher-level plan.

Summary

The meeting began with a round of introductions by everyone in attendance. During the introductions, Jennifer Starr took the opportunity to highlight the Local Government Advisory Committee (LGAC) Forum. This forum aims to address issues that impede local governments' abilities to further restoration efforts. The LGAC Forum will be held on **September 29th, 2022** and will focus on developing community resilience plans. The forum planning is in the early stages, and Jennifer invited members from the workgroup to take part in the planning process or provide names of those who might be interested. Jessica Rodriguez added that the Department of Defense Community Assistance Program has funding for community planning with an eye towards resilience planning. Jessica offered to help connect Jennifer with contacts who can provide more information on this funding and help with the forum. Nora Jackson mentioned that she would like to connect further with Jessica Rodriguez to discuss the resiliency plans and LGAC Forum.

Julie reviewed the goals of the meeting. She stated that the presentations for this meeting were updates on continuing efforts for current projects supported by the CRWG and an informational presentation on the high-level CBP Climate Change Directive.

Action Item

- LGAC Forum: Connect Jessica Rodriguez and Nora Jackson with Jennifer Starr to discuss and/or assist with the resiliency plans for the forum

1:40 PM **Takeaways from U.S. EPA's Resilient Coastal Wetlands Workshop – Julie Reichert-Nguyen (NOAA) and Taryn Sudol (MD Sea Grant)**

On May 24-25, 2022 the U.S. EPA's Office of Research and Development hosted a multi-jurisdictional (Northeast and Mid-Atlantic) workshop, with the goal of leveraging knowledge and lessons learned from across regions and organizations to help standardize, improve, and advance methods to support resilient coastal wetlands and communities. The objectives were to share scientific perspectives and discuss:

- *Coastal wetlands vulnerability and resilience*
- *Applications of resilience-based management*
- *Implications for coastal community resilience*

***A few CRWG members** participated in this workshop, and will share their thoughts and key takeaways. We would also like to hear the thoughts and takeaways from other members and interested parties who attended. All materials from the workshop can be found here.*

Questions to think about:

- *Were there any parameters (e.g. related to marsh resilience, condition, vulnerability) presented by the other programs that were of interest for targeting tidal wetland restoration projects in the Chesapeake Bay?*
- *Were there any tools of interest we should consider using or adapting to the Chesapeake Bay region?*
- *Were there any components of a decision framework that should be considered into our decision-making in the Chesapeake Bay?*

Summary & Discussion

This past May, the EPA Office of Research and Development hosted a multiregional workshop focusing on resilient coastal wetlands and communities. Julie briefly reviewed what topics the workshop covered and asked workgroup members and interested parties who attended to share their thoughts and key takeaways.

Julie started by stating how well the workshop was conducted; it was a two day workshop with folks from the Northeast and Mid-Atlantic sharing the different approaches they use to assess marsh vulnerability and inform restoration. The workshop focused on translating science for decision making, barriers and opportunities, capacity building, working with stakeholders, and dealing with uncertainty in modeled climate information.

She then highlighted a few tools that she thought would be useful in the Chesapeake Bay. The research conducted by TetraTech in the Delaware Bay incorporated not just sea level rise (SLR) projections, but also marsh condition, and storm surge projects when targeting marsh restoration projects. The research took an interesting approach to assessing marsh vulnerability, looking at long-term and short-term tipping points to inform management

decisions. She then highlighted the WATCH Marsh Assessment tool that was presented; currently this tool is a spreadsheet application but a website application is currently under development. This tool builds in various metrics including horizontal and vertical condition of the marsh, biology, hydrology, soil condition, and water quality. This tool assists with site specific diagnosis of marsh conditions. Lastly, she highlighted the Partnership of the Delaware Estuary effort to connect tools that help with project targeting and assessing marsh vulnerability together through a framework to create pathways from investigation to intervention in resilience work. One specific tool mentioned in the framework was the Marsh Features Mapper, which looks at different tactics based on the habitat type in the marsh and aims to understand trade-offs in the resilience or restoration projects (e.g. restoring high marsh versus low marsh). Essentially this tool is building in certain considerations to maximize the benefits of the marsh and resilience project. Julie connected this to the CRWG projects with the Wetland Workgroup, underscoring how we think about all the differing factors in the marshes to approach resilience projects to maximize the benefits.

Taryn Sudol was then asked to share her highlights from the workshop. She echoed a lot of Julie's impressions, saying it was a timely and well-conducted workshop, as the Chesapeake Bay region is putting a lot of focus on marsh resilience projects. This workshop demonstrated that throughout the Mid-Atlantic, there is the potential and the need to strategically conserve coastal wetlands but it raises the question, "what marshes do we prioritize and how do we maximize benefits?" This workshop did a great job at laying out a framework to approach those questions. She highlighted the fact that the current GIT Funded Marsh Adaptation project through the CRWG will help with answering those questions as well. She stated that the workshop was helpful in starting to think about how we are pulling the science and research in the Bay to target these resilience projects. While it is complex to conceptualize the full accounting of the marshes and assessing the value of ecosystem services, these tools and frameworks could make it more manageable. Taryn described how this workshop was also helpful in highlighting research that investigates how we assess valuation of marshes. Specifically, she thought Rhode Island's work on handling of marsh migration into hazardous or contaminated sites was important, as we need to think about how this could affect resilience efforts. She also found the presentation on methane sources to be relevant and interesting.

Kristin Saunders added her takeaways to the discussion; she highlighted two things that stuck out to her beside the TetraTech decision support tool that Julie highlighted. First was the discussion around hazardous and contaminated sites. This was the first time she had heard talk about the potential for those types of sites to be blocked to marsh migration. This made her think about all of the work that is being done to accelerate both forest buffers and wetlands work within the Bay Program. Within the Bay Program there has been a lot of talk about how to site restoration projects and if there are ways to implement these projects to account for marsh migration. Moving forward, there should be discussion around the condition of the chosen sites for marsh migration and the existence of any hazardous contaminants. The second takeaway from the workshop was the carbon crediting research at the EPA ORD; this aligns with a lot of the work done at the Bay Program aiming to quantify ecosystem services and how to fit it into existing support tools like CAST.

Julie mentioned that the CRWG plans on inviting Jordan West from EPA ORD to present on the proceedings of the workshop when they are available.

2:00 PM **Update on the STAR/CRWG GIT-Funded Marsh Adaptation Project—Julie Reichert-Nguyen (NOAA) & Nicole Carlozo (MD DNR)**

The Marsh Adaptation Project aims to further the Climate Adaptation Outcome by identifying large-scale tidal marsh restoration projects that maximize marsh benefits in areas with high marsh migration potential. The goals of the project are to build partnerships where organizational and geographic priorities align to collaboratively identify and support the implementation of restoration projects in concert with marsh resilience research. This project includes stakeholder engagement activities (i.e. outreach to individual stakeholder groups, workshop). Currently, the project leads are gathering initial resources and identifying potential partners to engage with during this project. ***The project leads are requesting help in identifying known partners implementing tidal wetland/marsh restoration projects and/or researching marsh resilience in Chesapeake Bay from the CRWG members and interested parties.***

Summary

Julie presented updates on the GIT-Funded project titled, "Partnership-Building and Identification of Collaborative Tidal Marsh Adaptation Projects." This project has been under development for a little over a year now and was spearheaded by a number of CRWG members, including Taryn Sudol, Molly Mitchell, Nicole Carlozo, and Jackie Specht. The goal of this presentation was to remind the CRWG what this project aims to achieve and discuss how the workgroup can provide support.

She began the presentation by reviewing the CRWG's two outcomes (i.e. Climate Monitoring and Climate Adaptation). Following the previously developed workplan, the CRWG has been working towards shifting focus from the monitoring outcome to the adaptation outcome, as there is need to focus on restoration projects to enhance the resilience of the Chesapeake Bay. This project aims to advance the adaptation outcome through aligning organizational restoration priorities with marsh resilience research to identify and support marsh collaborative adaptation projects.

This project has various components that help support the adaptation outcome; the overarching goal is to identify large-scale marsh adaptation projects. To help achieve this goal, the project aims to: (1) connect resilience and social vulnerability metrics for targeting marsh restoration projects, which is supported by the NOAA Climate Intern (Jackson Martingayle) who is compiling a list of these tools and the metrics they use to present to the contractor (Skeo) who will then map these tools to understand which metrics are used to target these projects and where; (2) align stakeholder organizational and geographic priorities with resilience research opportunities, which will be assessed through a survey and the results mapped to help

visualize potential focus areas; and (3) lastly, a workshop will be held to identify potential projects and partnerships to support research and implementation. This project will be supported by Skeo, the Chesapeake Bay Program GIS Team, the steering committee (including members of other workgroups), the STAR and CRWG staff, and the CRWG members, who we are looking to provide updates to and receive feedback from throughout this process. The CRWG could help identify partners working on tidal marsh and resilience research projects within the region to engage with to support this project.

The project is addressing some of our current workplan actions including: (1) assisting with building capacity building activities that support implementation of priority climate adaptation projects (action 2.2), which will help prepare to capitalize on future infrastructure funding; and (2) increase capacity to better understand sea level rise impacts to habitats and their ecosystem services (action 1.3), which is supported through the compilation of marsh adaptation tools and metrics. Lastly, this project helps address our science need to better understand sea level rise and subsidence impacts related to wetland loss, marsh migration, and adjacent land-use considerations.

This project is part of a greater effort to support marsh resilience. In 2019, MD Sea Grant hosted the Marsh Resilience Summit, which set the stage to build recommendations for marsh adaptation projects. Currently, the GIT-Funded "Synthesis of Shoreline, Sea Level Rise and Marsh Migration Data for Wetland Restoration and Targeting" project is in its final stages, which will provide recommendations that we can utilize for this Marsh Adaptation project. Lastly, there are a few workshop efforts (i.e. EPA Resilient Coastal Wetlands and Communities Workshop, CBP Habitat GIT Wetland Outcome Attainability Workshop, and the MD Sea Grant Tidal Wetland Proposal Workshop) that have or are occurring, which will help in this effort.

Julie then provided context as to why this work is important. Building marsh resilience to sea level rise will in turn help them continue to provide valuable ecosystem services. Furthermore, currently we have the opportunity to implement large-scale restoration strategies with cross-goal benefits and to help connect the smaller efforts that are primarily opportunistic and disconnected. Lastly, there is a need for conversations that help identify overlapping geographical and organizational priorities and siting criteria.

Five project outcomes were identified to help work towards the overall goal of the project. (1) Identify common criteria for targeting tidal marsh projects by compiling resilience and social vulnerability metrics, geographic priorities, and organizational goals across stakeholder groups; this work is already underway through the Climate Intern, Jackson Martingayle. Tools already identified include MD's GreenPrint, VA's AdaptVA, NOAA Sea Level Rise Viewer, and USGS Hazards portal tools. (2) Identify partners and projects within two focus areas (VA, MD, or tribal lands) that could support large-scale tidal marsh restoration using common criteria as a guide. (3) Identify data gaps and research needs to inform on-the-ground tidal marsh management and adaptation at regional scales. (4) Identify potential marsh research opportunities that could coincide with tidal marsh restoration efforts to increase understanding of the success of climate

resilience strategies. And (5) identify short and long-term funding opportunities for proposed collaborative tidal marsh restoration and research projects.

The project components are broken into three phases: Phase 1 includes reviewing existing partner metrics and tools, developing a partner outreach survey to gauge priorities, and geographically overlaying the partner metrics and priorities to select regional focus areas; Phase 2 includes hosting a 2-day workshop for stakeholders to discuss common criteria and research needs and identify areas for large scale projects; and Phase 3 includes preparing a report and standalone communication document that identifies metrics, projects, and supporting partner networks and linking the projects with funding opportunities.

Additionally, this project aims to build in diversity, equity, inclusion, and justice considerations. This is done through incorporating social vulnerability metrics in site selection, identifying organizational representatives assisting underrepresented and underserved communities to participate, and reserving part of the budget to compensate participants for their time.

Julie ended the presentation by stating that this project addresses several of the Chesapeake Bay Program's outcomes for the climate goal, vital habitats goal, and stewardship goal. She then asked the CRWG for assistance with this project. She posed four questions to the CRWG members and interested parties in an effort to identify and connect with partners: (1) does your organization plan and/or implement marsh restoration projects or conduct marsh resilience research; (2) does your organization use datasets to target resilience efforts; (3) do you know of other organizations in MD, VA, or tribal lands that we should reach out to for participation in this project; (4) are you interested in being on the steering committee?

Discussion

Jason Dubow asked in the chat what are the barriers to migration? And will social vulnerability metrics include the number of property renters or tenant farmers (i.e., those who don't own their homes or land) within coastal areas vulnerable to SLR and within a future wetland migration corridor? He added context as the MD Department of Planning is trying to address marsh migration in MD and have been grappling with understanding the barriers to migration. He highlighted the fact that this project aims to implement large-scale projects, so he was wondering how to broach the subject with landowners without them thinking that they are being asked to leave the land? Julie responded that this project will likely focus on identifying public or tribal lands for marsh restoration projects; however, this is an important topic as there are a lot of tidal wetlands on private land. Nicole added that they are trying to broach this topic by focusing on short-term opportunities versus long-term opportunities. By identifying areas that are already experiencing impacts, there may be less of a need to convince partners that action needs to be taken.

Nicole also responded to his concern about working on private property, which is a topic of discussion for the Fall Sea Grant Workshop, saying that these are discussions that are occurring prior to the workshop and that they will help focus where the effort will be directed for this

project. Taryn Sudol agreed with Nicole's explanation; she added that they are trying to focus the topics for the Sea Grant workshop on what will be most timely to discuss for this year. She did mention the potential for smaller projects that would join spatially could also have a big impact. Kristin Saunders also added that Chesapeake land conservation partnership has been interested in the nexus of conserving land for the purpose of restoration work. The Land Trust alliance have been trying to figure out effective ways to work with the land trust community to help with outreach for restoration work like these marsh and wetlands projects. She mentioned that it might be worthwhile to invite someone from the land conservancy space to sit on the steering committee; this would help bring in knowledge about local, homeowner outreach and perspective of land conservation for purposes of restoration.

Action Item

- GIT-Funded Project Steering Committee: Connect with Kristin Saunders on potential steering committee members who work within the land trust community/space

Pam Mason mentioned that there may be opportunities to apply for Soil Water Conservation District (SWCD) Conservation assistance funding for marsh restoration on agricultural lands. This is funding for projects that provide water quality benefits, including tidal and non-tidal wetlands conservation and restoration.

Kristin Saunders mentioned in the chat that the CBP Climate Directive Workplan also is focusing on a comprehensive tidal wetland restoration plan, which includes identifying common siting criteria. Julie added the efforts for this project can be built into that work.

2:20 PM **Presentation on the Tidal Portion of the STAC Rising Water Temperature Workshop Report—Jamileh Soueidan (CRC/NOAA)**

This presentation will briefly provide an overview of the tidal storyline and share the five draft management recommendations identified through the workshop and their associated science needs and implementation steps. These management recommendations fall within the four main themes that led Day 2 of the workshop discussions (i.e. ecosystem-based management, nearshore habitats, multiple stressors, and new temperature regime). The briefing paper covering these themes can be found here. ***The CRWG will discuss and provide feedback on these recommendations related to where the workgroup's expertise could support forward movement on proposed actions.***

Summary

Jamileh Soueidan presented on the tidal subgroup recommendations that were developed through the STAC Rising Water Temperature Workshop. Jamileh started by reviewing the three phases of the workshop, pre-workshop, Day One, and Day Two, and their objectives which were to understand the state of the science, identify drivers of warming temperatures and management implications, and identify management recommendations and associated science

needs, respectively. During day 1 of the workshop, the tidal subgroup focused on five main species groups and habitats (i.e. submerged aquatic vegetation, oysters, blue crabs, forage fish, and striped bass).

Jamileh then provided the scientific context to why this workshop was developed. Over the past three decades water temperatures have been rising in the Chesapeake Bay. In the tidal waters, rising water temperatures are primarily influenced by the warming ocean boundary and atmospheric forcings, making mitigation strategies harder to implement. Ecologically, the warming temperatures negatively impact eelgrass, while heat impacts to other submerged aquatic vegetation is not as well studied; additionally, the CO_2 fertilization effect may provide some counterbalance to the impacts of warming. Fisheries may experience both negative and positive impacts, with blue crabs and forage species experience positive impacts leading to increased productivity and habitat range, oysters experiencing negative impacts from climatic stressors like ocean acidification, and striped bass experiencing both positive and negative impacts depending on life stage.

For Day 2 of the workshop, four main themes, which emerged from Day 1 discussions, guided the discussions as management recommendations and science needs were identified and developed. The first was ecosystem-based management, which takes into consideration seasonal shifts, prey availability, and habitat change and suitability. The second is multiple stressors, which takes into consideration the co-occurring stressors and extreme events. The third theme is nearshore habitats which takes into consideration the strategic co-locating of restoration efforts or best management practices (BMPs) to maximize resilience. And the fourth is new temperature regime which takes into consideration the pros and cons of an ecosystem shift to a new temperature regime in the Chesapeake Bay.

The ecological implications that need to be considered with this new temperature regime are vast. The Bay will likely see species range shifts, with new species entering the Bay, leading to changes in current fisheries and the establishment of new fisheries. SAV habitat is likely to be reduced from sea level rise and shoreline hardening. There is likely a change in water clarity and salinity impacting both SAV and oysters. And the changes in SAV communities impacting species like crabs and fish, which utilize it as a nursery habitat. Additionally, there is evidence of changes in intensity, duration, and frequency of marine heatwaves, impacting survival of species within the Bay.

Jamileh shared the five draft management recommendations resulting from workshop discussions and post-workshop synthesis in relation to the four main themes. The first draft recommendation addresses the ecosystem-based management theme and states to “establish Chesapeake Bay wide Striped bass fishing guidance based on temperature and dissolved oxygen thresholds to reduce catch and release mortality, while considering developing habitat condition thresholds and fishing guidance for recreational fisheries species during periods of poor habitat condition.” Science needs to support this recommendation include: determining temperature and oxygen thresholds for striped bass and other key species; conducting

investigations to better understand behavior of anglers on the water; and developing habitat suitability models and indicators for key fishery resources.

The second draft recommendation addresses the nearshore habitat theme and states that the "Chesapeake Bay Program partners should develop common criteria and metrics to help target, site, design and implement tidal natural infrastructure projects in the nearshore where ecological and climate resilience benefits are highest." Associated science needs include: creating a detailed analysis of costs of natural infrastructure versus hardened infrastructure; conducting a threshold analysis of ecological impacts and benefit; conducting research into behavioral drivers behind shoreline hardening decisions; developing of criteria for targeting where multiple benefits and ecosystem services can be optimized; and using models to increase understanding of habitat change from sea level rise.

The third draft recommendation addresses the multiple stressors theme and suggests, "an interdisciplinary team of scientists, resource managers, meteorologists, and communicators should collaborate to design and create a publicly available heat wave alert system." Science needs to support this recommendation include: exploring real time monitoring of marine heat waves and need for forecast products; and developing a heat wave indicator that connects with living resource management and guidance to public; conducting outreach to public, and to partners in for help with development.

The fourth and fifth draft recommendations both address the new temperature regime theme. The fourth draft recommendation is communication focused and states to, "develop and implement a strategy to improve communications between living resource managers, scientists and stakeholders on the new temperature regime, the impacts and management response/adaptation strategies." Some of the associated science needs include: understanding where the gaps are in our current communication strategies; conducting social science research to help understand decision making; and developing communication strategies to specific audiences (e.g., policy-makers, managers, residents, local partners). The fifth draft recommendation focused on fisheries and states that partners should "explore strategic, long term ways to advance ecosystem approaches to fishery management in the Bay. This would include developing climate predictions and assessing the risks of environmental drivers on fishery species and their habitats to inform fishery management planning and decisions." Some associated science needs to support this recommendation include: improving environmental monitoring of surface and bottom temperature, dissolved oxygen and fish habitat condition; exploring a State of ecosystem report level synthesis for the Chesapeake Bay to track how climate change is progressing and for use by managers to adapt actions addressing the changes appropriately; better understanding of physiological response of certain species; exploring assessments for emerging fisheries to facilitate management as climate change creates conditions for these fisheries to be economically viable; and consider establishing monitoring stations where there are significant fisheries habitat and spawning grounds.

Discussion

Julie began the discussion by referencing the current CRWG workplan to see what efforts may align with the presented recommendations. She mentioned how there is potential to aid with the nearshore habitat recommendation; the GIT-Funded Marsh Adaptation project could help in building some of the criteria that were mentioned in the recommendation's science needs and implementation actions. This could be done through having conversations about targeting where co-benefits are maximized in these restoration sites. The other comment she had focused on the heat wave alert system; the workgroup is responsible for developing climate change indicators and, along with the Management Board, identified a need to develop a Bay-wide water temperature change indicator. She was wondering if there is a way to incorporate marine heat wave-type information into such an indicator, which would then help inform the development of an alert system. She then opened it up to the group to comment on the recommendations and how our workgroup could support the actions.

Kristin Saunders commented that the new Chesapeake Bay Program Director, Dr. Kandis Boyd, has a background in meteorology and could provide a useful link to the meteorological community when developing a marine heat wave alert system. Kristin further mentioned that CRWG members might serve as an important conduit to the fisheries and habitat folks in their own respective agencies. She stated that one of the major supporting actions that members of this workgroup can take is to make sure that the fisheries and habitat managers within their own organizations are aware of this information. She mentions that the level of detail outlined in the synthesis papers and the report when published is important for management decisions and gave the example of understanding *heaters* and *coolers* best management practices. She is not certain that level of detail is actually making its way back to managers, thus making it harder to make informed decisions.

3:00 PM **Update on Climate Change Directive Workplan—Bo Williams (U.S. EPA, CBPO)**
Bo Williams will present the current draft of the Executive Council's Climate Change Directive workplan. This workplan is the result of the Climate Directive No. 21-1. Through this directive the CBP commits to address the threats of climate change in all aspects of the partnership's work to restore the Bay and its watershed.

Summary
Bo Williams (EPA/CBPO) presented on the efforts to draft a workplan for the Executive Council's (EC) Climate Directive. This presentation covers the current draft of the workplan, which has been developed over the past few months by a small committee of partners. The goal of this workplan is to help improve partnership-wide coordination in addressing climate change. In this presentation, Bo reviewed the approach to this workplan and the partnership level actions that are drafted to fulfill this directive.

Bo first reviewed the sequence of events that led to this workplan. In October 2021, the EC signed the Climate Directive. Following this, the Principals' Staff Committee (PSC) directed the Management Board (MB) to develop a partnership response to this directive in November 2021. In December 2021, MB put out a call for volunteers to help devise a workplan; this team is not a formal action or ad hoc team, but rather an informal group of volunteers. Through

January to April 2022, this team, comprised of most of the Bay jurisdictions (with the exception of West Virginia) met and developed a crosswalk of partnership activities to determine what is currently being done to address climate change. This helped identify any gaps or opportunities in collaboratively addressing climate change. Most recently, from April through May 2022, the team drafted the workplan.

Bo further described the PSC's directive, which is to: (1) address the threats of climate change in all aspects of the partnership's work to restore the Chesapeake Bay and its watershed; (2) prioritize communities and habitats most vulnerable (e.g. forest buffers, wetlands, tree canopies) to ever-increasing risks; (3) apply the best scientific, modeling, monitoring, and planning capabilities of the Chesapeake Bay Program, such as improving BMP responses to climate change and improving climate monitoring and modeling; and (4) connect Chesapeake Bay restoration goals with emerging opportunities in climate adaptation, mitigation, and resilience.

Bo then gave an overview of the workplan approach and rationale for the plan. The workplan contains an introduction describing the actions that he went over previously in how this effort came about. Within the draft, the appendices contain the current and planned efforts taken by jurisdictions including the CBP, MD, VA, DE, DC, and NY, as well as federal agencies. The team felt it was important to showcase the work that is already being done to address climate change.

Bo then presented on the recommended partnership actions, which aim to address the identified needs, are foundational and effective in addressing climate change concerns, can be completed or substantively initiated by 2024, and are suited for the partnership collaboration and MB direction. The current recommendations are vague at the moment to allow for easier presentation to the executive bodies and also to allow for flexibility. The next step is to take the recommendations to the partnership bodies to help develop some of the finer details.

The partnership actions were then assessed for priorities by the jurisdictions; the following actions are presented in the order by priority as determined by the planning team leading this effort. The actions are as follows: (1) refine and prioritize climate science needs and develop a resource plan, which calls for a decision-making body to review the needs as identified by STAR and prioritize them for resources; (2) develop a Climate Directive pilot project, which calls for the MB jurisdictions to commit to on the ground work and would have a focus on nature-based projects with a DEIJ consideration; (3) advance conservation finance priorities, which calls on the Budget and Finance workgroup and GIT 6 to work with jurisdictions and GITs to showcase lessons learned in new innovations in conservation finances; (4) improve coordination on infrastructure and national funding for climate, which aims to improve competitiveness of Bay projects for this national funding programs; (5) establish a learning and capacity building network, with the goal of providing training and connection to workshops; (6) develop next steps for implementing PSC Monitoring report recommendations related to climate monitoring; (7) create a Bay-wide plan for tidal wetland restoration, marsh migration, and coastal resiliency, which will build on the currently GIT-funded Marsh Adaption project; (8) complete climate

change-related activities crosswalk and establish a mechanism for reporting future climate work, which would ask the MB for broader participation in the CRWG SRS process and progress assessment of resiliency activities; and (9) improve understanding of BMPs response to climate change, which highlights work that is already underway, including the work done with the WQGIT and CRWG reviewing the report titled *A Systematic Review of Chesapeake Bay Climate Change Impacts and Uncertainty: Watershed Processes, Pollutant Delivery, and BMP Performance.*

The next steps include asking the MB input on these actions and short-term versus long-term priorities. Then the team will present the final draft to the PSC for their approval in July 2022. Lastly, they will present the final workplan to the EC in September 2022.

Discussion

Julie thanked Bo for presenting this workplan and mentioned how beneficial it is for our workgroup members to hear about this effort. While this Climate Directive Workplan is separate from the CRWG workplan, having an understanding of the efforts put forth will help our workgroup identify how and where support can be given and if we can align any of our activities as a workgroup with the Climate Directive Workplan. Jessica Rodriguez asked if this version of the plan was available anywhere. He mentioned that he could forward the workgroup the most recent version of the workplan. Additionally, a newer version of the report is published on the PSC webpage as of July 6, 2022. Julie also added that after discussions with the CRWG Chair, Mark Bennett, they believe that our workgroup can likely support both the climate crosswalk objective (number 8) and the tidal wetland restoration objective (number 7). Lastly she added that previous blue carbon crediting efforts by the workgroup can help inform the conservation finance objective (number 3), and that we would be happy to provide this information to the Budget and Finance Workgroup.

Action Item

- Climate Directive Workplan: Request Bo Williams forward the CRWG the most recent draft of the workplan

3:20 PM **Wrap-up and announcements**

Announcements and Opportunities

- **Guidance for Using Maryland's Sea Level Rise Projections** was recently released. This guidance document aims to help users incorporate Maryland's 2018 sea level rise projections into planning, regulatory, and site-specific projects at the federal, state, and local levels. The document provides guidance for Maryland's 16 coastal counties, Baltimore City, and municipalities within the coastal zone. Click here to read more about the development of the guidance, any the FAQs, and to download the document.

- **Apply to serve as a Review Editor for the 5th National Climate Assessment**. U.S. Global Change Research Program is seeking nominations for Review Editors for the Fifth National Climate Assessment (NCA5). The Review Editor plays a critical role on the assessment, ensuring that the author teams appropriately consider and respond to all public and peer review comments. Applications are due **July 1, 2022**. More information can be found here.
- **October 25-27, 2022**: EcoAdapt National Adaptation Forum is being hosted in Baltimore. This forum gathers the adaptation community to foster knowledge exchange, innovation, and mutual support for a better tomorrow. The forum will be in person, with some virtual programming offered online. Registration is currently open. More information can be found here.
- The National Fish and Wildlife Foundation is requesting proposals for their American the Beautiful Challenge. This award seeks to fund projects across the following themes:
    1) Conserving and restoring rivers, coasts, wetlands and watersheds
    2) Conserving and restoring forests, grasslands and other important ecosystems that serve as carbon sinks
    3) Connecting and reconnecting wildlife corridors, large landscapes, watersheds and seascapes
    4) Improving ecosystem and community resilience to flooding, drought and other climate-related threats
    5) Expanding access to the outdoors, particularly in underserved communities

  Full proposals are due **July 21, 2022**; more information can be found here.
- The Bureau of Indian Affairs Branch of Tribal Climate Resilience is accepting proposals for their FY 2022 Awards Program. This award will support programs conducted by federally recognized Tribes and authorized Tribal organizations focusing on 1) Tribal climate resilience planning and strategy implementation and 2) ocean and coastal management planning. Proposals are due **July 6, 2022**. An informational webinar is being hosted April 25, 2022. More information can be found here.
- The Mid-Atlantic Regional Integrated Sciences and Assessments (MARISA) program is hosting a Building Climate-Resilient Rural Communities: What are the challenges, needs, and solutions workshop. The goal of this workshop is to bring together leaders from rural coastal communities across the Chesapeake Bay watershed to listen and learn about their needs, challenges, and equity issues, as well as share some existing climate tools that communities can link to funding opportunities. The workshop is being held July 13, 2022 at the Virginia Institute of Marine

Science. This one-day event is free to attend but registration is required. For more information can be found here.

- MARISA recently published their Mid-Atlantic Regional Climate Summary for Spring 2022. Some highlights include:
    - Temperatures were generally within two degrees of normal for the spring season across the Mid-Atlantic. This is similar to what we observed for the preceding summer, fall, and winter seasons.
    - The region generally experienced slightly wetter than normal conditions, with most locations experiencing between 100 and 125 percent of their normal spring precipitation amounts.

  For more information and to read the full summary, please see the latest MARISA Seasonal Climate Impacts Summary and Outlook.

3:30 PM Adjourn

Next Scheduled Meeting: July 18, 2022, 1:30-3:30 PM (please indicate on calendar invite if you plan to attend, maybe, or no, so we can gauge availability)

Upcoming Activities: Climate Strategic Review System (SRS) kickoff meeting planned for August 15, 2022 - progress review of CRWG's 2021-2022 workplan

Attendance:
Adrian Dascalu, Adrienne Kotula, Alexander Gunnerson, Amy Goldfischer, Angie Wei, Bianca Boggs, Bo Williams, Cassie Davis, Elizabeth Andrews, Gopal Bhatt, Jackson Martingayle, Jamileh Soueidan, Jason Dubow, Jeff Flood, Jennifer Starr, Jessica Rodriguez, John Denniston, Julie Reichert-Nguyen, Kristin Saunders, Matt Konfirst, Nicole Carlozo, Pamela Mason, Riley McDermott, Sophie Waterman, Taryn Sudol, Yi Liu