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MARYLAND COAST SMART COUNCIL

Photo credit: Nicole Carlozo

2019 ANNUAL REPORT

Prepared for the members of the
Maryland Coast Smart Council

Photo credit: Jenn Raulin

Larry Hogan, Governor
Jeannie Haddaway-Riccio, Secretary

Photo credit: Kevin Wagner

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Chesapeake and Coastal Service
Maryland Department of Natural Resources
580 Taylor Ave., E-2 | Annapolis, Maryland 21401
Phone: 410-260-8732 | Fax: 410-260-8739
Toll free in Maryland: 877-620-8367
Out of state call: 410-260-8732 (TTYUsers call via the MD Relay)
Website: dnr.maryland.gov/ccs

The Maryland Coast Smart Council is chaired by the secretary of the Maryland Department of Natural Resources and supported by the department staff through funding from the National Oceanic Atmospheric Administration. Other state agencies represented on the council include the Maryland departments of Budget and Management, Commerce, Environment, Legislative Services, Planning, and Transportation, the Maryland Emergency Management Administration, the Critical Areas Commission and the University System of Maryland.

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MAKING MARYLAND RESILIENT

A Summary of 2018 and 2019 Actions to Reduce Risk

- In May 2018 Maryland, in partnership with the Association of Climate Change Officers launched the nation's first Climate Leadership Academy (academy) to advance the capacity of state and local government agencies, infrastructure organizations and businesses to develop and implement sound climate change initiatives. The academy's keystone offering, the Certified Climate Change Professional® (CC-P®) Training Program, was designed to help participants build competencies to effectively integrate climate change into their decision-making and professional activities, as well as to advance their entrepreneurship and leadership skills. Since November 2018, the academy has graduated over 250 professionals through four cohorts.
- Senate Bill (SB) 1006/House Bill (HB) 1350 was passed by the Maryland General Assembly during the 2018 legislative session and signed into law by Governor Larry Hogan. The bill included expanding the work of the Coast Smart Council (council) to include local projects funded by the state, changing the vulnerability assessment standard from 100-year flood to Category 2 storm surge, addressing nuisance flooding, saltwater intrusion and adding the Maryland State Treasurer to the council.
- The council approved a revision in 2018 to the Coast Smart Construction Program (program) that featured the Coast Smart Assessment and Certificate (certificate). The certificate is intended to help state agency personnel and others understand and apply the program guidelines for various phases of their capital project to prevent or minimize the future impacts of coastal and riverine flooding, storm surge and sea level rise. The certificate and program guidelines can be found on the Council Website.
- On Nov. 16, 2018, council members and support staff met with Board of Public Works (BPW) staff and state agency representatives familiar with the budget and project approval process to discuss how to best document project compliance with siting and design guidelines, as well as SB 1006/HB 1350 changes to the program.
- From May 16-18, 2018, the Department of Transportation and its Maryland Port Administration (MPA) along with the Maryland Department of the Environment (MDE), hosted the first North American GreenPort Congress. This international conference brought together maritime professionals from around the world to discuss environmental initiatives and developments. Conference sessions included adapting to climate change, building a sustainable logistics/supply chain, innovative techniques and technologies to support dredging, and sustainability practices.
- The Maryland Emergency Management Agency (MEMA), which administers the federal Hazard Mitigation Assistance Program, offered three grant programs to eligible applicants throughout the state: Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) Grant Program and FloodMitigation Assistance. The Federal Emergency Management Agency (FEMA) issued two Presidential Disaster Declarations for storm events in Maryland that occurred in May 2018. These declarations made HMGP funding available. Additionally, the MEMA received 60 notices of interest from local jurisdictions for the PDM and Flood Mitigation Assistance (FMA) programs.

MAKING MARYLAND RESILIENT

A Summary of 2018 and 2019 Actions to Reduce Risk

- In FY18, there were two state-owned projects located in climate impact areas. In addition, 10 local projects receiving state funding were flagged in the capital budget using the Climate Change Impact Area overlay.
- The council, the Maryland Department of Natural Resources (DNR) and the University of Maryland College Park School of Architecture partnered to conduct a graduate-level design studio program and test design strategies for a net-zero energy, low-impact field research and education station in Princess Anne, Maryland.
- University of Maryland Eastern Shore (UMES) developed a Flood Mitigation Program Manual to support climate adaptation and resilience efforts on the UMES campus.
- DNR's Chesapeake and Coastal Services (CCS) developed the Green Print Parcel Evaluation Tool to identify and prioritize the conservation and protection of ecologically important watershed resources, including those important for coastal resilience. The tool is available to state and local agencies, land conservation organizations and trusts and individual property owners.
- Resiliency through Restoration Initiative, funded by Governor Hogan through the governor's capital budget, provided technical and financial assistance to restore, enhance and create coastal habitat at six project sites across four Maryland jurisdictions. In 2019, four additional projects were selected via the DNR competitive Grants Gateway solicitation and were approved by the Board of Public Works (BPW).
- The Maryland Coastal Bays Program (MCBP) completed a climate change vulnerability assessment of their organization and the activities outlined in the Program's Comprehensive Conservation and Management Plan. The assessment was prepared by the University of Maryland Sea Grant Extension and includes consensus among management and key stakeholders about how climate change will affect the organization. A portion of MCBP management plan includes goals to address climate change vulnerabilities in the watershed and identifies and prioritizes risks that could limit MCBP's ability to reach these goals.
- The Maryland Department of Transportation's State Highway Administration (SHA) published a public ArcGIS Online Viewer to show mapped flood depths and roadway vulnerability to various sea level rise scenarios and storm impacts. This viewer can be easily accessed on any device and shows coastal inundation modeling statewide.

MAKING MARYLAND RESILIENT

A Summary of 2018 and 2019 Actions to Reduce Risk

- To improve air quality and reduce emissions, the Maryland Port Administration (MPA) worked with partners to repower or replace dray trucks and cargo handling equipment that will increase fuel efficiency and reduce greenhouse gas emissions. Funds received through the U.S. Environmental Protection Agency and the Maryland Department of the Environment (MDE} helped replace more than 175 dray trucks to date. MPA also replaced metal halide lights with LED lights, which reduced energy consumption and ultimately greenhouse gas emissions.
- To enhance water quality by managing stormwater, the MPA completed one underground stormwater management vault and is currently constructing a second at Dundalk Marine Terminal to help manage stormwater from extreme weather events. MPA also commenced a Stormwater Program to evaluate future flooding risks and identify solutions at Dundalk Marine Terminal. The design and construction of additional marine terminal space at both the Fairfield Wet Basin and South Locust Point Fruit Pier Slip, and construction of the new building 91C at Dundalk Marine Terminal, included increasing the elevation of the new space to enhance overall resiliency.
- The MPA commenced an assessment of properties they own to identify areas for possible living shoreline projects to increase resiliency.
- The first annual Maryland Flood Insurance Roundtable, which included diverse state and local leaders, was held on May 8, 2019 at the Navy-Marine Corps Memorial Stadium in Annapolis. Key takeaways from the meeting included a continued need for clear, concise and simplified communications about flood risks and need for flood insurance, some home and business owners had an incorrect perceptions regarding risks throughout the state, a disconnect between the price and value of flood insurance, and the identification of continued need to communicate, with tailored messaging to home and business owners, renters and other stakeholders about risk reduction strategies.
- HB 1427 passed during the 2019 legislative session clarified the applicability of siting and design guidelines, extended deadlines for revising the siting and design criteria and nuisance flood plans and made technical corrections to clarify implementation during the interim.
- At the May 20, 2019 meeting, the council voted on and approved a new, more protective vulnerability standard - the 100-year flood elevation plus three feet - to trigger the application of the Coast Smart guidelines. The standard is also representative of the requirement established in SB 1006/HB 1350 that a structure withstand the storm surge generated by a Category 2 hurricane.

MAKING MARYLAND RESILIENT

A Summary of 2018 and 2019 Actions to Reduce Risk

- Water Quality and Climate Change Resiliency Portfolio: This effort will identify a long-term portfolio of natural infrastructure and nature-based projects that will optimize water quality, living resources, greenhouse gas reductions and other environmental benefits. These projects will also reduce climate change risks posed to Maryland's coastlines, which impact recreational opportunities and our economic well-being. Having a pipeline of identified projects will better prepare Maryland and its communities to take advantage of existing and emerging funding opportunities that promote the use of natural infrastructure to build resilience to climate impacts.
- During the 2019 legislative session, Maryland reinvested in the Comprehensive Flood Management Grant Program. The program was created in 1976, and funded numerous projects that reduce flood-related impacts however, no new funding was put into the program between 2002 and 2019. In 2019, $5 million was approved for FY20.

INTRODUCTION

Chapter Chapter 415 of the 2014 Laws of Maryland (HB 615), established the Coast Smart Council (the council) in the Maryland Department of Natural Resources (DNR). One of the primary tasks of the council, staffed by DNR and comprised of private sector and state agency membership, was to establish Coast Smart Siting and Design Criteria (criteria) to address sea level rise and coastal flood impacts on state funded capital projects planned and built by units of state government

The 2014 legislation also required state capital projects that include the construction of a new structure or the reconstruction of a structure with substantial damage to be constructed or reconstructed in compliance with the criteria approved by the council. The criteria, summarized below, provides guidelines and directives applicable to the preliminary planning and construction of a proposed capital project; requires the lowest floor elevation of each structure located within a Special Flood Hazard Area to be built at an elevation of at least 2 feet above the base flood elevation; and establishes a process to allow a unit of state government to obtain a waiver from complying with the requirements.

The Coast Smart Construction Program (program), which became effective July 1, 2015, sets out the siting and design guidelines developed by the council and establishes the procedures and priorities for all state agencies that plan, budget, design or build facilities in areas vulnerable to coastal flooding and sea level rise.

Annual Reporting to the Council

Beginning on Oct. 1, 2016 and for every year thereafter, all units of state government are to report to the council on individual state agency actions, which were undertaken within the previous fiscal year and related to the implementation of the program, including Categorical Exceptions and Waiver determinations.

It is intended that the council will review the program on an annual or “as necessary” basis to address issues, which may occur as the building of state facilities and knowledge of Coast Smart building practices evolve. The Annual Report (report) helps the council evaluate the program and supports the further development or refinement of criteria, categorical exceptions, general standards and procedures for applying and obtaining a waiver.

COAST SMART CONSTRUCTION PROGRAM

COAST SMART CONSTRUCTION PROGRAM	
Siting Guidelines	***Design Guidelines***
New state structures, the reconstruction of substantially damaged state structures and other new major infrastructure projects shall be avoided within areas likely to be inundated by sea level rise within the next 50 years.	New state structures, the reconstruction of substantially damaged state structures, and new major infrastrcture projects shall be designed to avoid or minimize future impacts over the anticipated design life of a project.
New state "critical or essential facilities" shall not be located within SFHA designated under the National Flood Insurance Program (NFIP) and should be protected from damage and loss of access as a result of a 500-year flood.	New state structures and the reconstruction or rehabilitation of substantially damaged state structures located in SFHA shall be construc-tured with a minimum of two feet of freeboard above the 100-year base flood elevation defined by the NFIP.
Ecological features that may serve to buffer a project from the impacts of future sea level rise, coastal flooding or storm surge or that support general climate adaptation practices shall be identified, protected and maintained	State structures serving transportation pur-poses that are not water dependent on inte-gral infrastructure shall be constructed with a minimum of two feet of freeboard above the 100-year base flood elevation, as defined by NFIP.
Exceptions to these guidelines may be considered, provided that it can be demon-strated that projects have been designed to increase resiliency to future impacts.	Flooding potential shall be considered when choosing building materials for all structural projects, including minor improvements or maintenance and repair.
	Structures and infrastructure proposed within the Limit of Moderate Wave Action boundary as mapped under the NFIP shall be designed in compliance with construction standards ap-plicable to areas subject to inundation by the one percent annual flood event and storm-in-duced waves, called V Zones.
	Exceptions to these guidelines may be warranted based on consideration of cer-tain factors established by the council.

SECTION I: LEGISLATIVE UPDATES

2018 Senate Bill 1006/ House Bill 1350 - Coast Smart Council

During the 2018 legislative session, Senate Bill 1006 (cross filed with House Bill 1350) passed and was approved by Gov. Larry Hogan. The bill expands the applicability of the Coast Smart siting and design criteria established by the council and modifies a requirement that must be included in the criteria. Under the preexisting law, the criteria applied to state capital projects planned and built by units of state government that are partially or fully funded with state funds or include construction of a structure or the reconstruction of a structure with substantial damage. Under the bill, the criteria apply to state and local projects (not specifically limited to capital projects) – for which at least 50% of the project costs are funded with state funds – which include the construction of a structure or highway facility or the reconstruction of a structure with substantial damage. The bill also specifies that the criteria do not apply to a public work contract of less than $500,000.

The bill also included the insertion of "highway facility" which is defined to include any one or more or combination of projects involving the rehabilitation and reconstruction of highways in the state highway system to meet present and future needs and the development and construction in new locations of new highways necessitated by traffic demands to become parts of the state highway system, including federally-aided highway projects partially funded by the state and all incidental property rights, material, facilities and structures. "Highway" is defined to include (1) rights-of-way, roadway surfaces, roadway subgrades, shoulders, median dividers, drainage facilities and structures, related stormwater management facilities and structures, roadway cuts, roadway fills, guardrails, bridges, highway grade separation structures, railroad grade separations, tunnels, overpasses, underpasses, interchanges, entrance plazas, approaches and other structures forming an integral part of a street, road, or highway, including bicycle and walking paths and (2) any other property acquired for the construction, operation, or use of the highway.

Additionally, the bill replaced the requirement that the lowest floor elevation of each structure located within a special flood hazard area be built at an elevation of at least two feet above the base flood elevation with the requirement that a structure be designed and constructed or reconstructed in a manner to withstand the storm surge from a storm that registers as a category 2 on the Saffir-Simpson hurricane wind scale, including a requirement for structures to be constructed or reconstructed at a minimum elevation above the projected storm surge. The bill also expands the purpose of the Coast Smart Construction Program by requiring the siting and design criteria "to address sea level rise inundation and coastal flood impacts on state and local projects."

2018 Senate Bill 1006/House Bill 1350

Sea level rise inundation is defined as the inundation of land from a sea level rise of two feet, as determined by the council . This criterion replaces the requirement "to address sea level rise and coastal flood impacts on capital projects." In addition, the bill requires the council to consult with the Maryland Department of Transportation (MDOT) in the establishment of the siting and design criteria. The state treasurer, or the state treasurer's designee, is also added to the council.

Following are key mandates of SB 1006/ HB 1350 and descriptions of implementation activities, accomplishments and challenges:

SB 1006/HB 1350 - Plan to Adapt to Saltwater Intrusion

"By Dec. 15, 2019, the Department of Planning, in consultation with the Department of Natural Resources, the Department of the Environment and the Department of Agriculture must establish a plan to adapt to saltwater intrusion. The plan must be updated at least once every five years. "Saltwater intrusion" is defined as the movement of water with a total dissolved-solid concentration greater than or equal to 1,000 mg/L to freshwater and includes surface water, aquifers and soils."

During 2018, a technical team consisting of representatives from the state agencies charged with the development of the plan met with stakeholders to define the scope of "saltwater intrusion," and to develop mechanisms for addressing each issue. The team presented a report framework to the council at its May 20, 2019 meeting.

SB1006/HB1350 -Criteria for Use of State Funds for Hazard Mitigation

"The Board of Public Works, in conjunction with the Department of Natural Resources, Department of the Environment and the Emergency Management Agency, must establish criteria to evaluate whether state funds may be used to mitigate hazards associated with sea level rise inundation and coastal flooding. The criteria must incorporate specified tools to assess the vulnerability of an area or a structure to those hazards."

Preliminary communications between council members, support staff and the BPW staff took place during 2018. At its Dec. 3, 2018 meeting, the council committed to developing criteria to evaluate the use of state funds for mitigation by Dec. 31, 2019.

SB1006/HB1350 - Local Plans to Address Nuisance Flooding

By July 1, 2019, a local jurisdiction that experiences nuisance flooding must develop a plan to address nuisance flooding and submit a copy of the plan to the Department of Planning. A plan must be updated at least once every five years and must be published on a local jurisdiction's website.

Council members and state agency staff worked collaboratively with legislative sponsors to develop a more realistic timetable to address these issues.

House Bill 1427 - Sea Level Rise Inundation and Coastal Flooding

HB 1427, entitled: "Sea Level Rise Inundation and Coastal Flooding – Construction, Adaptation and Mitigation," passed during the 2019 legislation and was approved by Gov. Larry Hogan on May 13, 2019. The new law, with an effective date of July 1, 2019, included three important changes: (1) clarified the applicability of siting and design guidelines, (2) extended deadlines for revising the siting and design criteria and nuisance flood plans and (3) made technical corrections to clarify implementation during the interim. A summary of changes follows:

1. Applicability: Capital Projects

NR 3-1009.

(a)(1)This section applies to State and local **CAPITAL** projects for which at least 50% of the project costs are funded with State funds.

(2) This section does not apply to a **[**public work contract of**]** **CAPITAL PROJECT THAT COSTS** less than $500,000.

2A. Siting and Design Criteria Deadline

NR 3-1009.

(b)(1) Beginning July 1, **[**2019**]** **2020**, if a State or local **CAPITAL** project includes the construction of a structure or highway facility, the structure or highway facility shall be constructed in compliance with siting and design criteria established under subsection (c) of this section.

(2) Beginning July 1, **[**2019**]** **2020**, if a State or local **CAPITAL** project includes the reconstruction of a structure with substantial damage, the structure shall be reconstructed in compliance with siting and design criteria established under sub-section (c) of this section.

2B. Nuisance Flooding Plan Deadlines

NR 3-1018.

(a) **ON OR BEFORE OCTOBER 1, 2019, THE DEPARTMENT OF PLANNING, IN CONSULTATION WITH THE DEPARTMENT AND THE DEPARTMENT OF THE ENVIRONMENT, SHALL DEVELOP AND PUBLISH GUIDELINES TO ASSIST LOCAL JURISDICTIONS IN THE COLLECTION OF DATA TO ESTABLISH NUISANCE FLOODING BASELINES.**
(B)(1) On or before **[**July 1, 2019**]** **OCTOBER 1, 2020**, a local jurisdiction that experiences nuisance fl ooding shall develop a plan to address nuisance flooding.
Technical Corrections

Section 2 of Chap. 442.

- Until the council adopts revised siting and design criteria to comply with 2018 legislation, the current program applies.

- Highway facilities are not subject to the current program.

Section 3 of Chap. 442.

- Once the council adopts revised siting and design criteria to comply with 2018 legislation, the Maryland Department of Budget and Management (DBM), the Maryland Department of General Services (DGS) and DNR will need to incorporate them into the appropriate instructions and policies.

SECTION II: INSTITUTIONALIZING COAST SMART SITING AND DESIGN CRITERIA INTO STATE PROGRAMS

Since July 1, 2015, state agencies have been working to incorporate the siting and design guidelines into appropriate planning, design and construction processes as a means to institutionalize the Coast Smart practices approved by the council.

Update on Coast Smart Assessment and Certificate

In 2018, the council approved a new version of the program, including the Coast Smart Assessment and Certificate. The revised program was developed to fulfill a request from the Maryland State Treasurer to indicate whether projects coming before the BPW had complied with the criteria.

On Nov. 16, 2018, members of the council and technical staff, BPW staff, and state agency representatives familiar with project review and approval processes met to review the revised Assessment and Certificate and solicit comments on the document. Also included in the discussion were the changes to the program mandated by SB 1006/HB 1350, and how those changes would affect the revised program documents. It became evident that the assessment was similar to the Environmental Assessment Form used by most state agencies and that the certificate, in its current form, would not meet the objectives of the group. A consensus was reached to add a Coast Smart checklist to the current Environmental Assessment Form used by state agencies when they are submitting projects to the BPW for approval.

During 2019, a team of council members and agency staff developed revisions to the Environmental Assessment Form and presented the results to the council. At the Aug. 5, 2019 council meeting, the Coast Smart component was approved by the council. The team continues to work on the broader Environmental Assessment Form, which had not been updated since the 1970s. Given public notice requirements, the anticipated date for completion is 2020.

SECTION III. STATE AGENCY PROJECTS AND GRANTS AND LOANS ADMINISTERED BY STATE AGENCIES

DBM annually produces the capital budget of the State of Maryland. The capital budget consists of state-owned capital projects and grant and loan programs administered by state agencies to support local government capital projects. State capital projects are required to be constructed or renovated in compliance with Coast Smart siting and design criteria. In the event that a state-owned project is located in an area that is vulnerable to coastal flooding and sea level rise, DBM's Office of Capital Budgeting, with the expertise of MDP and DNR, verifies that Coast Smart siting and design criteria have been incorporated in project descriptions and facility program documents.

In FY18, there were two state-owned projects located in climate impact areas. In addition, 10 local projects receiving state funding were flagged in the capital budget using the Climate Change Impact Area overlay. In FY19, there were three state-owned projects located in climate impact areas. In addition, eleven local projects receiving state funding were flagged in the capital budget using the Climate Change Impact Area overlay.

Photo credit: Jenn Raulin

SECTION IV. CATEGORICAL EXCEPTIONS AND CRITERIA WAIVERS

The program includes provisions for state agencies to apply for Categorical Exceptions for certain project types and uses as well as to request Waivers from one or more of the specific siting and design criteria.

Categorical Exceptions

Under the Categorical Exception provision, agencies may determine that certain projects and uses are exempt from strict application of the criteria, provided that it can be demonstrated that those projects have been designed to increase resiliency to future impacts. Categorical Exceptions currently include the following project types and uses:

Water-dependent uses. Projects that require continued direct access to the water as an integral part of the use, or facilities that directly support water dependent uses.

Existing transportation assets. Projects that support the continued function of existing transportation systems assets.

Passive public access. Projects that provide either recreational or scenic access to water bodies or shoreline areas and need to be within a flood zone to accomplish their purpose.

Historic structures. Projects that require the investment of state resources in properties individually listed or determined eligible for listing in the National Register of Historic Places or a contributing resource within a historic district listed or determined eligible for listing in the National Register.

Temporary structures or uses. Structures intended to be in place for less than 180 consecutive days in any given calendar year or will be removed at the end of a construction project.

Stabilization projects. Actions to secure and maintain assets, structures and natural or cultural resources and to prevent additional or future resource/facility damage; efforts to mitigate a safety or environmental hazard, including mold remediation, facility weatherization, silt fencing and minor repairs and restorations.

Emergency uses. Structures essential to save lives and protect property, public health and safety.

While excepted projects are exempt from strict application of the criteria, they are required to employ Coast Smart principles and practices, wherever practicable. Agencies using a categorical exemption are also required to submit documentation and reporting materials on an annual basis. Reporting documents will be used by the council for the purposes of further development and/or refinement of Coast Smart Siting and Design Criteria, Categorical Exceptions, or general standards and procedures for applying and obtaining a waiver.

If needed, agencies may request a formal consultation with the council for the purposes of reviewing a proposed project or seek a determination of compliance with the Categorical Exception provision listed aboveategorical Exception provision listed above.

IIn FY18 and FY19, no agencies reported project types or uses as Categorical Exceptions or requested formal consultation with the council.

Coast Smart Criteria Waivers

Any unit of state government may request a waiver from one or more of the specific Coast Smart Siting or Design Criteria. Waiver requests are reviewed and approved by the Smart Growth Coordinating Committee (SGCC) in consultation with the council. Agencies seeking Criteria Waivers submit the Waiver Request and supporting information to the SGCC. On an annual basis, the waiver requests will be included in the Smart Growth Subcabinet report in a section documenting any coordinating committee decision regarding Coast Smart Construction Policy. Similarly, waiver requests and decisions will be reported annually to the council in this report. In FY18 and FY19, no projects applied for waivers.

Photo Credit: Jenn Raulin

SECTION V. STATE AGENCY ACTIONS AND INITIATIVES

In addition to implementing Coast Smart guidelines for the construction of new state structures, or the reconstruction or rehabilitation of substantially damaged state structures, state agencies provide multiple technical and financial assistance programs to help communities assess their vulnerability to coastal flood hazards, identify natural and nature-based features that improve coastal resiliency and adopt Coast Smart practices into project planning and infrastructure improvements to mitigate coastal flooding, storm surge and sea level rise.

Maryland Climate Leadership Academy

In spring 2018, DNR in partnership with the Association of Climate Change Officers (ACCO) convened a day-long summit with local leaders, state and federal government officials and regional and national climate experts to help outline a framework for what would become the Maryland Climate Leadership Academy (academy). Launched in fall 2018, the Maryland Climate Leadership Academy became the nation's first state-led program aimed at helping community leaders, infrastructure organizations, local governments and state agencies effectively plan for and implement climate change initiatives.

The academy is being developed and overseen by an Advisory Council that is comprised of Maryland state and community leaders, national climate experts and academia. This group will continue to advise on the development of the academy through specific offerings, including climate change professional certification preparation, subject area workshops, local elected official leadership training and scenario based preparedness training.

The academy's keystone offering, the Certified Climate Change Professional® (CC-P®) Training Program, is designed to help participants build competencies to effectively integrate climate change into their decision-making and professional activities, as well as to advance their entrepreneurship and leadership skills. On Nov. 19-20, 2018 Cohort A, Class #1 met at Chesapeake College in Wye Mills, MD. Cohort C, Class #1 met at the Ellicott City Community Center on Dec. 18-19. 2018. The Maryland Climate Leadership Academy CC-P® training continued its capacity building work in 2019. Cohort A Classes #2 (Jan. 24-25, 2019) and #3 (April 9-10, 2019) were held at Chesapeake College in Wye Mills. MD. Cohort B Class #1 (Feb. 19-20, 2019), Class #2 (May 7-8, 2019) and Class #3 (June 12-13, 2019) met at Hagerstown Community College. Cohort C Class #2 (March 19-20, 2019) and Class # 3 (June 6-7. 2019) met at the Ellicott City Community College. Cohort D Class #1 (June 3-4, 2019), Class #2 (July 22-23. 2019) and Class # 3 (Sept. 9-10, 2019) met at Montgomery College. Cohort E Class #1 (Sept. 12-13, 2019), Class #2 (Nov. 4-5, 2019) and Class #3 (Dec. 16-17, 2019) met at Johns Hopkins University.

Each course provides participants with critical training on climate preparedness, economic impacts, energy and water management, entrepreneurship, governance and risk management. The academy is looking to expand its offerings and is adding one day workshops focused on local elected leaders, climate financing strategies and launching an online learning lab with modules dedicated to health and climate, changing oceans, bays and rivers and basic climate science.

Baltimore Hosts First North American GreenPort Congress

From May 16- 18, 2018, the Department of Transportation and its Port Administration, along with MDE hosted the first North American GreenPort Congress in Baltimore, Maryland. The GreenPort Congress is an international conference that brings together maritime professionals from around the world to discuss environmental initiatives and developments. Conference sessions included adapting to climate change; building a sustainable logistics/supply chain; innovative techniques and technologies to support dredging; and sustainability practices. The conference was held at the Baltimore Convention Center and brought 196 attendees from 14 countries and 6 continents.

MDE Hosts First Annual Maryland Flood Insurance Roundtable

The first annual Maryland Flood Insurance Roundtable, which included diverse state and local leaders, was held on May 8, 2019 at the Navy-Marine Corps Memorial Stadium in Annapolis. The event was cosponsored by the MDE, Maryland Insurance Administration and MEMA, with support from FEMA.

The day began with short presentations by the cosponsors. A facilitated panel discussion followed with experts in insurance, banking, emergency management, real estate, floodplain management and data management. After lunch, participants broke into small groups to discuss five key themes: insurance affordability, communication challenges, training and outreach, successful local-level floodplain management and mitigation.

The following are key learnings and takeaways:

Panel Discussion

- There continues to be a strong need to develop clear, concise and simplified communications and messaging about flood risk and the need for flood insurance, both within and outside the boundaries of the Special Flood Hazard Area, throughout the state.
    - Right now, all parties agreed that there is an incorrect perception of risk throughout the state. Homeowners, business owners, etc. do not understand their risk or see the value of flood insurance if they are outside the special flood hazard area.
    - This also underscores a disconnect between the price of flood insurance and the perceived value of flood insurance.
- It is important to continue to communicate with homeowners and business owners about what they can do as individuals in order to lower their flood risk.
- There is a need to develop tailored messaging for communicating risk to renters versus homeowners.
- Insurance agents looking to brush up on flood insurance basics, including writing a policy, are encouraged to sign up for National Flood Insurance Program (NFIP) agent training courses.

Break-Out Sessions

Affordability

- IIn an effort to increase flood insurance coverage throughout the state, the possibility of a new flood insurance program with updated requirements was discussed.
- While it is hard to control the cost of flood insurance, messaging surrounding flood insurance and flood risk is in each agencies' control. This messaging can be focused on the "financial literacy of affording flood insurance," and highlight how flood insurance can and should fit into someone's budget.
    - Using prior flood events and highlighting how those events financially affected those without flood insurance as case studies can be a way to communicate this message.

Communication Challenges

- To better communicate flood risk and the need for flood insurance, the possibility of a statewide flood insurance themed campaign was discussed. The campaign could be a joint effort between state partners, organizations within the private sector and the Federal Emergency Management Agency, similar to the ongoing anti-smoking "Truth" campaign.

Training and Outreach

- It is important to focus on targeted training and outreach, specifically for those outside of the typical audience who have already received this education, such as first-time homebuyers. Targeted training and outreach could be done through a first-time homebuyer workshop that communicates flood risk and flood insurance in clear, simplified messaging.


Photo Credit: Kevin Wagner

- *The Maryland Resiliency Partnership and/or the Maryland Association of Floodplain and Stormwater Managers could be a vehicle for this training and outreach.*

Floodplain Management

- Successful local-level floodplain management requires stronger interagency relationships. Different agencies have different priorities, which can be a barrier, but it is important to find a common ground and highlight how each agencies' priorities can all link back to flood risk and floodplain management.

Mitigation

- There is a recognized need to find ways to incentivize mitigation action on the part of property owners. An example of a possible incentive could be tax breaks. As part of this incentive program, it is important to focus messaging on property owners who may have "flood risk amnesia," i.e., those who forget about past flooding issues and have not kept mitigation at the forefront of their minds.

The next Maryland Flood Insurance Roundtable is planned for 2020.

MEMA Hazard Mitigation Assistance (HMA)

The MEMA administers the FEMA's Hazard Mitigation Assistance. There are three grant programs associated with the HMA:

- Hazard Mitigation Grant Program (HMGP), which assists in implementing long-term hazard mitigation measures following a major declaration;
- Pre-Disaster Mitigation (PDM) Grant Program, which provides funds for hazard mitigation planning and projects on an annual basis; and
- Flood Mitigation Assistance (FMA), which provides funds for projects to reduce or eliminate risk of flood damage to buildings that are insured under the National Flood Insurance Program (NFIP) on an annual basis.

In 2018, eligible applicants throughout the state applied for the HMGP, the PDM Grant Program and the Flood Mitigation Grants. The Emergency Management Agency received 62 notices of interest for the Federal fiscal year 2018 and 36 for Federal fiscal year 2019 for the PDM and Flood Mitigation Assistance programs. During 2018, FEMA issued two Presidential Disaster Declarations for storms making two streams of HMGP funds available. The Emergency Management Agency will solicit and submit sub applications for these two HMGPs in calendar year 2019. In FY19 there were three state owned projects in climate impact zones and 11 local projects

In 2018, FEMA awarded approximately $6.8 million for HMGP grants for Maryland Severe Winter Storm and Snowstorm (FEMA Disaster Declaration Number: DR-4261), declared on March 4, 2016; approximately $1.1 million for HMGP grants for Maryland Severe Storm and Flooding (FEMA Disaster Declaration Number: DR-4279), declared on Sept. 16, 2017; approximately $530,000 for PDM; and approximately $103,000 for FMA. MEMA received 11 subapplications for Maryland Severe Storms and Flooding (FEMA Disaster Declaration Number: DR-4374), declared on June 25, 2018; and 8 subapplications for Maryland Severe Storm and Flooding (FEMA Disaster Declaration Number: DR-4376), declared on July 2, 2018.

Beneficial Use of Dredge Material

In 2001, Maryland passed the Dredged Material Management Act, which defined Maryland's "Beneficial Uses" of dredged material, including habitat restoration, beach nourishment, shoreline stabilization and thin-layer placement. These beneficial uses increase coastal shoreline and community resiliency while dramatically reducing the financial costs of dredged material disposal and coastal restoration projects. Though these beneficial uses have been defined and social, environmental and economic benefits have been identified, the next step is optimizing beneficial use opportunities in Maryland. DNR is implementing that next step in the following ways:

- In 2019, DNR's CCS launched a webpage detailing the department's work related to the beneficial use of dredged material.
- Through the Living Shorelines program, the Waterway Improvement Fund and the Community Resiliency Grant Program, DNR is demonstrating the benefits of incorporating dredged material into shoreline restoration projects. This includes two projects funded through DNR's Community Resilience Grant Program that will use dredged material as fill in the construction of resilient shorelines, thereby reducing the cost of these restoration projects while restoring natural habitats and increasing protection to the adjacent communities.
- To ensure that dredged material is placed and utilized in environmentally responsible ways, DNR is developing a policy entitled "Dredged Material Placement on Resources Managed by the Department of Natural Resources," that will be accompanied by policy guidance, "Beneficial Use of Dredged Material Planning Process," both expected to be complete in 2020. Before pursuing a project that may beneficially use dredged material, the policy and guidance will help project planners understand the requirements and recommendations for implementing these types of projects.
- For beneficial use projects to occur, the suitability of dredged material for the given restoration project must be evaluated using the Maryland MDE's "Innovative Reuse and Beneficial Use of Dredged Material Guidance Document."
- Additionally, dredging and restoration projects must align in space and time. To better align dredging and restoration projects, DNR developed and launched a new conservation tool to identify opportunities for the beneficial use of clean dredged sediments. Beneficial Use – Identifying Locations for Dredge (BUILD) is a mapping tool that will support the state's Chesapeake Bay restoration efforts, protect infrastructure and investment, and enhance coastal resiliency. BUILD, accompanied by a user manual and story map, is currently available to the public via the Maryland Coastal Atlas
- Beneficially using dredged material for elevation enhancement, also known as thin-layer placement, is an emerging restoration technique in the mid-Atlantic region. Elevation enhancement is a marsh restoration technique that uses dredged material to add sediment to a marsh to help the marsh combat processes such as sea level rise, erosion and subsidence. To better understand the practice of elevation enhancement, throughout 2019 the Maryland Chesapeake Bay National Estuarine Research Reserve (CBNERR-MD) participated NERR System Science Collaborative Project on Thin-Layer Placement. Eight NERR sites across the country, including the Chesapeake Bay Maryland National Estuarine Research Reserve, are being studied to help identify the impacts of dredged material depth and quality on the response of marshes to elevation enhancement. Results from the study will help inform elevation enhancement best-management practices across the country.
- The MDOT Port Administration (MPA) continued to implement its Innovative Reuse (IR) Strategy, which includes identifying projects where harbor dredged material could be innovatively or beneficially used to enhance climate change resilience. As part of the IR Strategy, MPA led a Design with Dredge research collaboration in 2017, which created a conceptual design to restore the Turner Station Fleming Park shoreline.

This project will enhance coastal resiliency and provide outdoor recreation opportunities to local residents while reducing flood risks to the properties along the water. This potential project was awarded $30,000 from a philanthropic donor to further refine the design, as fundraising continues.

- MPA also actively worked on identifying projects on owned property where dredged material can be used in any upcoming coastal resiliency efforts to enhance its infrastructure. Harbor Development is committed to working across departments within MPA to ensure that the use of dredged sediment as fill material has been fully evaluated and analyzed as these types of projects advance.

Resiliency through Restoration Initiative

DNR continued management of the Resiliency through Restoration Initiative, funded through the state capital budget. The short term goal of the initiative is to demonstrate how natural and nature-based features can be integrated into local resilience planning and help protect communities and economies from climate change impacts.

This goal will be reached through the implementation and tracking of 15 nature-based projects that address coastal, stormwater and floodplain impacts. In 2018, six projects were selected via DNR's competitive Community Resilience Grant program and were approved by the BPW. The department worked with local governments and nonprofits in four jurisdictions to begin design of the selected shoreline, stormwater and wetland enhancement projects. Additionally, CBNERR developed monitoring protocol to assist in project monitoring and performance tracking. These efforts complement six ongoing design projects from 2017.

In 2019, four additional projects were selected via the department's competitive Grants Gateway solicitation and were approved by the BPW. Projects were selected to expand the suite of resiliency practices by integrating dredged material and addressing precipitation-induced flooding. The department worked with local governments and nonprofits in four jurisdictions to begin design of the selected shoreline, stream connectivity, urban flooding and beneficial use projects.

Photo credit: Nicole Carlozo

Healthy Soils

In 2017, Gov. Larry Hogan signed legislation establishing the Maryland Healthy Soils Program. House Bill 1063, which went into effect on Oct. 1, 2017, directs the Maryland Department of Agriculture to provide farmers with research, education, technical assistance and, subject to available funding, financial assistance to improve soil health on Maryland farms.

As part of this effort, DNR is developing a pilot program to promote the adoption of healthy soils practices on DNR agricultural leased land. The program would incentivize farmers to choose practices to improve soil health and department staff are reaching out to experts in this field to establish protocols for assessing soil improvements, develop a suite of options for farmers to choose from and assess an incentive program to ensure adoption by agricultural lease holders. There are monthly meetings of the Healthy Soils Consortium that bring together stakeholders including researchers, farmers, service providers, nonprofits and state agencies.

Maryland Coastal Bays Vulnerability Assessment

In 2018, MCBP completed the first five steps of the EPA's "Being Prepared for Climate Change: A Workbook for Developing Risk-Based Adaptation Plans." This Climate Change Vulnerability Assessment was conducted to learn about and prepare for the ways climate change stressors might affect MCBP's ability to reach the 14 goals of the 2015-2025 Comprehensive Conservation & Management Plan (CCMP). The outcome of this assessment is the identification and prioritization of 168 risks that could limit MCBP's ability to reach those goals. Chief among the priorities to address are the impacts climate change will have on the Water Quality goals and Fish and Wildlife goals of the CCMP.

The assessment is a risk-based approach designed specifically to consider risks and impacts to the CCMP and not how climate change stressors affect the entire region or watershed. The framing question used in the process was, "what are reasonably foreseeable ways that climate stressors could keep your organization from achieving its goals?"

The completed consequences/probability matrices provide the MCBP with two important results: (1) a broad, risk-based assessment of climate change vulnerability in the system and (2) consensus among management and key stakeholders about how the climate change risks will affect the organization (EPA 2014).

University of Maryland College Park Design Studio

The council, DNR and the University of Maryland College Park School of Architecture partnered to conduct a graduate-level design studio to program and test design strategies for a net-zero energy, low-impact field research and education station in Princess Anne.. The effort served to create concept designs for the Chesapeake Bay National Estuarine Research Reserve (CBNERR), but the effort itself serves as a real-life illustration of how to build in a coastal area that is also in line with local and state regulations. Thirty-three graduate students and faculty engaged with personnel from DNR. Products developed include drawings (diagrams, plans, sections, elevations, perspective views and details), written summaries, recommendations, lessons learned and graphics to illustrate Maryland's Coast Smart Construction guidelines.

The final report was presented to the council at its Aug. 5, 2019 meeting. The excellent work by the students and faculty for this initial project has prompted discussion about how the council might engage students and faculty again in the future.

University of Maryland Eastern Shore Flood Mitigation Program Manual

University of Maryland Eastern Shore (UMES), the state's historically black 1890 land-grant institution, has its purpose and uniqueness grounded in distinctive learning, discovery and engagement opportunities in the arts and sciences, education, technology, engineering, agriculture, business and health professions. The mission of the Facilities Planning, Design and Construction Department is to provide and maintain the physical facilities of UMES in the best possible condition and to plan for and provide new and updated facilities and infrastructure to enhance the growth potential of all the departments. They provide facilities for current and future programs at the university and ensure the efficient utilization of assigned spaces and campus physical resources. Under the leadership of the Facilities Planning, Design and Construction Department, UMES developed a Flood Mitigation Program Manual to support UMES campus climate adaptation and resilience efforts. Key issues addressed include:

Flooding: Over time, the frequency of heavy-rainfall events on the Eastern Shore of Maryland have increased. The short, intense storms bring a volume of runoff that the existing UMES storm drain network is incapable of collecting. Clogged and undersized drains prevent stormwater from being safely conveyed from campus prior to discharge to the Manokin River tributaries that are adjacent to campus. The tributaries of the Manokin River, according to FEMA, have a 100-year Base Flood Elevation (BFE) of 8 feet NAVD 88. Many parts of campus, including portions of buildings and utilities, are within that floodplain and require renovations to protect from flood and heavy-rainfall events.

Maintenance: Due to the many other maintenance activities required at a large university campus, maintenance of existing stormwater management facilities is often the lowest priority. Sediment has not been removed from wet ponds, vegetation has become overgrown and storm drains have not been cleared of obstructions. More consistent maintenance of these facilities will help to alleviate flooding during heavy rainfall events. It is recommended that UMES prepare a maintenance plan for the stormwater management facilities on campus to ensure that operations are optimized.

Power Outages: Power outages have become a regular occurrence during storm events on the UMES campus. Many of the buildings on campus, especially in the low-lying areas, have basement sump pumps. During power outages, these pumps do not run and the water collects because it cannot be discharged appropriately.

The recommended renovations to UMES are, first and foremost, for the benefit of students, faculty and campus visitors. Damages to university buildings during floods and heavy-rainfall events have proven to weaken the structures and increase the likelihood of negative health effects. For example, black mold was found in the basement of the Frederick Douglass Library where flooding had damaged drywall.

Renovations were also recommended to prevent impacts of flooding on daily operations of the University. Flooding over the years has prevented the University from hosting events, prevented students from entering certain portions of buildings and has required university employees to change their job duties. When basements on campus flood, facilities managers are forced to turn on emergency generators and to turn on sump pumps if they are not constantly running. Lastly, all proposed renovations to the UMES campus and its buildings are to limit maintenance costs after flooding and heavy-rainfall events. After each event, damages have been found to one or more of the following: drywall, communications equipment, mechanical equipment and electrical equipment. All proposed renovations to campus have the goal to lower all future maintenance costs, promote a safe and healthy living/learning environment and protect all University resources related to flooding and rain damage.

All work that is to occur within this project relates to flood prevention and mitigation. Various types of improvements will be required in order to mitigate the impacts of flooding on the campus infrastructure and facilities. This work falls under both utility and site development projects. The utilities projects that will occur include design and updates to the electric, sewer and storm systems. The electrical work will consist of raising transformers and transfer switches above flood elevations and adding emergency power to buildings with sump pumps. Sewer system work will include the replacement of portions of the existing sewer system on the campus, raising the rim elevation of sewer manholes located in flood prone areas and adding check valves in the floor drains.

Storm drainage work will include the addition of check valves and tideflex valves in the existing storm network, the renovation/ addition of storm drains outside of several buildings on campus and the addition of sump pumps in several buildings on campus. The site development projects that will occur can be further split into structural and stormwater management projects. Structural work will include the addition of flood walls around the basement and building entrances as well as the construction of a flood wall and levee road along the Manokin Branch. Stormwater management work will include maintenance of existing stormwater management ponds as well as the addition of stormwater management ponds and green technology at select locations on campus.

Green Print Parcel Evaluation Tool

DNR launched an innovative new tool to evaluate the conservation benefits of every parcel of land across the state.

The Parcel Evaluation Tool was designed to identify and prioritize the conservation and protection of ecologically important land and watershed resources in Maryland for use by state and local agencies, land conservation organizations and trusts and individual property owners.

The publicly available tool incorporates the department's latest mapping technologies and scoring formulas to determine areas of high-ecological and natural resources value. Users can even create a conservation benefits assessment report card, which analyzes and rates individual parcels on a number of factors, including coastal resiliency, wetland adaptation areas, connectivity, habitat and more.

The Parcel Evaluation Tool was developed by the department through funding provided by the National Oceanic and Atmospheric Administration. The tool can be accessed at _https://geodata.md.gov/greenprint/.

Vulnerability Mapping Tools

MDOT-SHA published a public ArcGIS Online Viewer to show mapped flood depths and roadway vulnerability to various sea level rise scenarios and storm impacts. This viewer can be easily accessed on any device and shows coastal inundation modeling statewide.The impact on ecosystem services of sea level rise and changing climatic conditions in the state.

Air Quality Improvements at Maryland's Marine Terminals

To improve air quality and reduce emissions, MPA worked with partners to repower or replace dray trucks and cargo handling equipment that will increase fuel efficiency and reduce greenhouse gas emissions. Funds received through EPA and MDE helped replace more than 175 dray trucks to date. MPA also replaced metal halide lights with LED lights which reduced energy consumption and ultimately greenhouse gas emissions.

Stormwater Management at Maryland's Marine Terminals

To enhance water quality by managing stormwater, MPA completed an underground stormwater management vault and is currently constructing a second at Dundalk Marine Terminal to help manage stormwater from extreme weather events. MPA also commenced a Stormwater Program to evaluate future flooding risks and identify solutions at Dundalk Marine Terminal. The design and construction of additional marine terminal space at both the Fairfield Wet Basin and South Locust Point Fruit Pier Slip and construction of the new building 91C at Dundalk Marine Terminal, included increasing the elevation of the new space to enhance overall resiliency..

SECTION VI. FOLLOW-UP ACTIONS and RECOMMENDATIONS

1. Revise Environmental Assessment Form to Document Project Compliance with Coast-Smart Guidelines

At the request of the Maryland State Treasurer, the council agreed to develop an easy way for the BPW to be assured that certain projects complied with the Coast Smart siting and design guidelines. After meeting with BPW staff and representatives of several state agencies, the council determined that revising the Environmental Assessment Form (EAF) to include Coast Smart checklist items was the best path forward. Since DNR developed the EAF to assist in the implementation of the Maryland Environmental Protection Act, the department, in consultation with the council, should revise and update the EAF to document project compliance with the Coast Smart siting and design guidelines.

- ***Status: The council approved the "Coast Smart" component of the EAF at the Aug. 5, 2019 council meeting. The full revision of the EAF, including public notice and comments, will likely occur in 2020.***

2. Implement SB 1006/HB 1350

During 2019 and 2020, the council will implement the changes made by the 2018 legislation. The sponsors of the bill also indicated that they would like the council to provide feedback on ways to clarify and improve the 2018 bill. To date, the council has identified the following Program elements for consideration:

a. *Expand the Program from "Coast Smart" to "Coast Smart and Climate Ready."*

Risks to Maryland citizens associated with a changing and unpredictable climate extend beyond tidally–influenced coastal areas (e.g., Ellicott City and I-83 flooding in north Baltimore). Consequently, the council's siting and design criteria should not only address coastal flooding, storm surge and sea level rise, but also riverine flooding. Over the past several years, the council has considered several options to apply the siting and design criteria in riverine areas. These options have focused on MDE's Waterway Construction Division, which regulates activities conducted in nontidal waterways, including the 100-year floodplain. After further consideration, however, the council decided that the appropriate action was to amend the Coast Smart statute so that the sitting and design criteria can be applied consistently and ensure that whenever possible, state and local capital projects are not located in areas that are vulnerable to both inland and coastal flooding.

b. *Develop a Vulnerability Assessment Standard to Identify Flood Risk from Sea Level Rise, Storm Surge and Other Climatic Events.* SB 1006/HB 1350 called for a more protective vulnerability assessment standard since many areas outside of special flood hazard areas are experiencing flooding on a regular basis. While the legislation required that a structure be designed and constructed or reconstructed to withstand a category 2 storm surge, this standard was not considered technically feasible by state experts. Consequently, the council needed to identify a feasible option for assessing vulnerability that complements the requirements of SB 1006/ HB 1350. In addition to identifying a vulnerability standard for compliance with coast smart guidelines, the council must also develop a mapping tool that will help to appropriately site state and local projects and help to identify vulnerable structures and highway facilities.

The council formed an expert workgroup who determined that the 100-year FEMA floodplain maps plus a 3-foot rise to convey resiliency via elevations is the most technically feasible and accurate approach for addressing the Coast Smart siting and design criteria. After reviewing Storm Surge Inundation Maps and a variety of different storm scenarios, the council's expert workgroup felt that the use of the storm surge inundation maps would not adequately characterize flood risk or accurately predict where the water may go, rendering them functionally useless in the context of siting, design and construction. This approach also allows the council's approach to be tied to existing floodplain regulations and provide more precision for determining minimum elevation criteria.

- ***Status: At the May 20, 2019 meeting, the council voted to approve a new, more protective vulnerability standard of the 100-year flood elevation plus three feet to trigger the application of the Coast Smart guidelines. The standard is also representative of the requirement established in SB 1006/ HB 1350 that a structure withstand the storm surge generated by a Category 2 hurricane. The council and state agencies continue to develop, evaluate and use new mapping tools to help assess the vulnerability of state communities, assets and infrastructure***

c. *Consider Broader Impacts.* The council may want to consider that there may be times when Maryland might experience flooding greater than the 2-5 foot sea level rise projections or predicted storm surges. Recent events in North Carolina indicate that a direct hit from a hurricane can extend inland and create flooding that not only exceeds sea level rise projections, but also the 100-year flood elevation, which is the trigger established by FEMA for purchasing flood insurance. Therefore, while it is important to establish a vulnerability standard for planning purposes, the standard should never be taken as an indication that flooding in Maryland will never exceed our sea level and climate change estimates. The council may want to consider an educational campaign to emphasize that flooding from a hurricane could be more severe and there may be other risks beyond the sea level rise projections and vulnerability standards.

d. *Establish Criteria for Mitigation Funding.* *SB 1006/HB 1350 includes the following requirement: "The Board of Public Works (BPW), in conjunction with the Department of Natural Resources, Department of Environment and the Emergency Management Agency, must establish criteria to evaluate whether state funds may be used to mitigate hazards associated with sea level rise inundation and coastal flooding. The criteria must incorporate specified tools to assess the vulnerability of an area or a structure to those hazards." Preliminary communications between council members, council support staff and BPW staff took place during 2018. The council committed to developing criteria to evaluate the use of state funds for mitigation by Dec. 31, 2019. The council will seek additional clarification from the bill sponsors regarding this legislative charge and, in cooperation with the BPW, will develop environmental criteria by Nov. 18, 2019 that the BPW can use to assess projects and allocate mitigation funds.*

- ***Status: The council reviewed and approved environmental criteria for mitigation funding at its Nov. 18, 2019 meeting.***

e. *Support Local Jurisdictions in the Development and Implementation of Nuisance Flooding Plans.* *SB 1006/HB 1350 included the following requirement: "By July 1, 2019, a local jurisdiction that experiences nuisance flooding must develop a plan to address nuisance flooding and submit a copy of the plan to the Department of Planning. A plan must be updated at least once every five years and must be published on a local jurisdiction's website."*

Given that the state had not adequately defined "nuisance flooding" or provided guidance to local jurisdictions on what was required in nuisance flooding plans, council members and state agency staff worked collaboratively with legislative sponsors to develop a more realistic timetable to address these issues.

- ***Status: HB1427, entitled Sea Level Rise Inundation and Coastal Flooding – Construction, Adaptation and Mitigation, passed during the 2019 legislative session and was approved by Gov. Larry Hogan on May 13, 2019. The new law had an effective date of July 1, 2019 and included three important changes that:***

  (1) clarified the applicability of siting and design guidelines, (2) extended deadlines for revising the siting and design criteria and nuisance flood plans and (3) made technical corrections to clarify implementation during the interim.

- ***In partnership with local jurisdictions, the council continues to define the elements of a nuisance flooding plan, identify available resources to assist local communities and make recommendations for the next phase of implementation.***
- ***In October 2019, a Nuisance Flood Planning Guidance for local governments was completed by MDP and DNR and provided to local governments.***
- ***As a result of HB 1427, the submission deadline for local governments susceptible to nuisance flooding was pushed back to Oct. 1, 2020.***

SECTION VI: APPENDICES

APPENDIX A - COAST SMART COUNCIL MEMBERS

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Chair

Jeannie Haddaway-Riccio, Secretary
Maryland Department of Natural Resources
580 Taylor Ave., C4
Annapolis, MD 21401
Phone: 410-260-8104
jeannie.riccio@maryland.gov http://dnr.maryland.gov/Pages/default.aspx

Members

Sepehr Baharlou, P.E., Principal
BayLand Consultants & Designers, Inc.
7455 New Ridge Rd., Suite T
Hanover, MD 21076
Phone: 410-694-9401
Email: sbaharlou@baylandinc.com
http://www.baylandinc.com/

Michael Bayer, AICP, Manager
Infrastructure and Development
Maryland Department of Planning 301 West Preston St., Suite 1101
Baltimore, MD 21201
Phone: 410-767-7179
Email: michael.bayer1@maryland.gov
http://planning.maryland.gov/

Kate Charbonneau, Executive Director
Critical Area Commission for the Chesapeake and Atlantic Coastal Bays
1804 West St., Suite 100
Annapolis, MD 21401
Phone: 410-260-3460
Email: kate.charbonneau@maryland.gov
http://dnr.maryland.gov/criticalarea/Pages/default.aspx

Chris Elcock, Associate Principal
GWWO Inc., Architects
800 Wyman Park Dr., Suite 30D
Baltimore, MD 21211
Phone: 410-332-1009
Email: celcock@gwwoinc.com
http://www.gwwoinc.com/

Dr. Peter Goodwin, President
University of Maryland
Center for Environmental Science
P.O. Box 775
Cambridge, MD 21613
Phone: 410-221-2001
Email: lstepp@umces.edu
http://www.umces.edu/

Susan Gore, Budget Analyst
Office of Capital Budgeting
Maryland Department of Budget and Management
301 W. Preston St., Suite 1209
Baltimore, MD 21201
Phone: 410-767-4522
Email: susan.gore@maryland.gov
http://dbm.maryland.gov/Pages/home.aspx

Sandy Hertz, Assistant Director
Office of Environment
Maryland Department of Transportation
7201 Corporate Center Dr.
Hanover, Maryland 21076
Phone: 410-865-2780
Email: shertz@mdot.state.md.us http://www.mdot.maryland.gov/
http://www.mdot.maryland.gov/

Tim La Valle, Director
Office of General Services
Maryland Department of Commerce
401 E. Pratt St., 10th Floor
Baltimore, MD 21202
Phone: 410-767-2202
Email: timothy.lavalle@maryland.gov
http://commerce.maryland.gov/

Dr. Lewis E. (Ed) Link
Dept. of Civil and Environmental Engineering
University of Maryland College Park, MD
Phone: 301-471-5012,
Email: elink@umd.edu
https://cee.umd.edu/

Bill Neville, Director of Planning and Community Development
Town of Ocean City
301 N. Baltimore Ave.,
Ocean City, MD 21842
Phone: 410-289-8798
Email: BNeville@oceancitymd.gov
https://oceancitymd.gov/oc/

Spyridon Papadimas, P.E.
Capital Projects Manager
Department of General Services
301 West Preston St.,
Baltimore, Maryland 21201
Phone: 410-767-4293
Email: spyridon.papadimas@maryland.gov
http://www.dgs.maryland.gov/

Mary Phillips, County Planner
Somerset County
11916 Somerset Ave.,
Princess Anne, MD 21853
Phone: 410-651-1424
Email: mphillips@somersetmd.us
http://www.somersetmd.us

Gary Setzer, Advisor
Office of the Secretary
Maryland Department of Environment
1800 Washington Blvd.
Baltimore, MD 21230
Phone: 410-537-3744
Email: gary.setzer@maryland.gov
http://www.mde.maryland.gov

JaLeesa Tate, State Hazard Mitigation Office
Maryland Emergency Management Agency
5401 Rue Saint Lo Dr.,
Reisterstown, MD 21136
Phone: 410-517-3600
Email: jaleesa.tate@maryland.gov
http://mema.maryland.gov/

Staff

Joe Abe, Coastal Policy Coordinator
Chesapeake and Coastal Service
Maryland Department of Natural Resources
580 Taylor Ave., E2
Annapolis, MD 21401
Phone: 410-260-8740
Email: joseph.abe@maryland.gov
http://dnr.maryland.gov/climateresilience/Pages/cs_Council.aspx

Allison Breitenother, Coordinator
Chesapeake and Coastal Service
Maryland Department of Natural Resources
580 Taylor Ave., E2
Annapolis, MD 21401
Phone: 410-260-8774
Email: allison.breitenother@maryland.gov