

October 1, 2020

Memorandum #2020-119

TO: HRPDC Coastal Resilience Subcommittee

BY: Robert A. Crum, Jr., Executive Director

RE: Subcommittee Meeting – October 6, 2020

The next HRPDC Coastal Resilience Subcommittee meeting is scheduled for **Tuesday, October 6, 2020 at 10:00 AM**. The agenda and related materials are attached.

Pursuant to the declared state of emergency in the Commonwealth of Virginia in response to the COVID-19 pandemic and to protect the public health and safety of the subcommittee members, staff, and the general public, the Coastal Resilience Subcommittee meeting will be held electronically via Webex. Participants may join the meeting using the following information.

Join by computer: <https://executive-director.my.webex.com/executive-director.my/j.php?MTID=m67127ffa2b62a3b41b99131d28b79287>

-OR-

Join by phone: +1-415-655-0001 US Toll

Meeting number/Access code: 126 328 1535

Password: pW5s3mp3CFE (79573673 from phones)

BC/cm

Attachments

HRPDC Coastal Resilience Subcommittee:

Andria McClellan, Norfolk
Kelly Convirs-Fowler, Virginia House of Delegates
Barbara Henley, Virginia Beach
David Jenkins, Newport News
McKinley Price, Newport News
John Rowe, Portsmouth
Donnie Tuck, Hampton
Ella Ward, Chesapeake

Copy:

Keith Cannady, HRPDC
Whitney Katchmark, HRPDC
Ben McFarlane, HRPDC
Ashley Gordon, HRPDC

**HRPDC
Coastal Resilience Subcommittee
Meeting Agenda**

**Tuesday, October 6, 2020
10:00 am**

Pursuant to the declared state of emergency in the Commonwealth of Virginia in response to the COVID-19 pandemic and to protect the public health and safety of the subcommittee members, staff, and the general public, the Coastal Resilience Subcommittee meeting will be held electronically.

- I. Call to Order**
- II. Introductions**
- III. Public Comment Period**
- IV. Coastal Resilience Legislative Priorities (Attachments)**

At its last meeting, the Coastal Resilience Subcommittee identified four resiliency legislative priorities for recommendation to the HRPDC. Attached for the Subcommittee's review are summary papers that provide background information on the following legislative requests:

- A. Formation of the Commonwealth Flooding Board
- B. Incorporating Resilience into SMART SCALE
- C. Building for Future Precipitation
- D. Real Estate Disclosures for Flooding

Staff plans to present these resilience legislative priorities to the full HRPDC Board on October 15. Staff requests input from Subcommittee members on these summary papers.

- V. Proposed Building Code Changes**

Virginia established a Resiliency Sub-workgroup to recommend changes to the Uniform Statewide Building Code to be considered by the Board of Housing and Community Development. The sub-workgroup included representatives from several localities and the HRPDC. Sixteen proposals were submitted to the group for its recommendation. Of these, eleven were recommended for adoption by the Board by consensus. The remaining five were submitted to the Board with a "non-consensus" recommendation. The consensus recommendations will be considered by the Board in a block vote, while the non-consensus recommendations will be voted on individually. HRPDC staff reviewed the non-

consensus recommendations with the Coastal Resiliency Staff Committee who supported their adoption.

Staff will provide a briefing and update on this effort.

VI. Draft Resolution for C-PACE (Attachment)

At a previous Subcommittee meeting, members discussed the Commercial Property Assessed Clean Energy (C-PACE) program and recommended that the region consider a resolution supporting this program. Enclosed for the Subcommittee's review is a draft resolution that could be considered by the HRPDC Board. Staff requests the Subcommittee's input on this proposed resolution.

VII. Other Business

VIII. Next Meeting

IX. Adjournment

Virginia Commonwealth Flooding Board

Virginia needs a new entity to direct and prioritize state and federal funding for flood mitigation, ensure collaboration and alignment among State agencies, and coordinate planning and adaptation efforts. . In the Commonwealth, flooding is caused by three sources, which sometimes occur simultaneously: precipitation, wind, and tides. Flooding impacts all regions of Virginia including those with upland, riverine, and coastal environments. Each of these drivers appears to be getting worse as a result of changing climatic conditions. Extreme rainfall events repeatedly have caused riverine and inland flooding and have also intensified coastal flooding. Coastal areas are also experiencing the impacts of sea level rise. Increased sea level means regular high tide events result in more flooded roads and properties and storm events impact larger portions of coastal communities. There is a need to define the scope of these problems, design solutions, and invest in mitigation.

The General Assembly should create a Commonwealth Flooding Board (CFB) to be an oversight body to coordinate flood mitigation efforts at the State level. The CFB would be similar to the existing Commonwealth Transportation Board, which meets on a regular basis to address critical transportation needs and issues in Virginia. The CFB would be responsible for performing the same function for statewide flooding issues and should address the following:

- provide a statewide forum for the discussion of flood mitigation and coordination among state agencies and regions in efforts to address this critical challenge.
- approve a prioritized list of projects to be funded by the Community Flood Preparedness Fund,
- approve a prioritized list of proposed investigations to be conducted by the US Army Corps of Engineering Civil Works program
- oversee the implementation and updating of the Coastal Resiliency Master Plan at least every 5 years
- annually evaluate the alignment of the following state programs and associated grants and loans with the Commonwealth’s flood mitigation objectives

VDOT six-year improvement program	VEDP Brownfields
VDOT long-range transportation plan	VDEM Building Resilient Infrastructure in Communities
DCR Dam Safety, Flood Prevention and Protection Assistance Fund	VDEM Hazard Mitigation Plans and Grants
DEQ Water Quality Improvement Fund	VDH Clean Water Revolving Fund
DHCD Community Block Development Grants	VDH Drinking Water Revolving Fund

Virginia currently receives federal funding to multiple state agencies that could be applied to planning and mitigation efforts. The state hasn’t developed priorities to guide the use of federal funding to address flooding. Each agency administers their programs without coordination with other State agencies. Often programs that could be used for flood mitigation and adaptation are used for other



purposes because flooding isn't a particular agency's primary or traditional mission. For example, VDOT isn't focused on rebuilding or replacing roads that flood. VEDP isn't focused on reusing brownfields to mitigate flooding or to address remediation needs in flood-prone areas. DCHD isn't focused on reducing the impacts of flooding on communities. All of these agencies and more have programs with federal funding that could support a coordinated state plan to reduce the impacts of flooding. Virginia needs a plan and a Commonwealth Flooding Board to keep track of all of these opportunities and to make sure the Commonwealth works strategically and comprehensively to mitigate flood risks.

Another significant source of federal funding is the U.S. Army Corps of Engineers (USACE) Civil Works program. The Water Resources Development Act authorizes the USACE to conduct investigations of specific water problems throughout the nation. Some of these authorized projects are implemented each year in accordance with the USACE's annual work program. Virginia needs to develop a prioritized list of investigations to position itself to compete with other states. The Commonwealth will not be eligible for the billions in federal construction funds that are spent under the USACE Civil Works program unless Virginia is first included in the authorizations and appropriations for new investigations and is able to get those projects included in the work program.

In addition to federally funded programs, there will be new state funds dedicated to flood mitigation. In 2020, House Bill 22 created the Community Flood Preparedness Fund. The fund will make loans and grants available to localities for coastal and riverine flood prevention and mitigation projects. Based on HB 981, proceeds from Virginia's participation in the Regional Greenhouse Gas Initiative (RGGI) will be allocated to the Community Flood Preparedness Fund. DEQ estimates that roughly \$50M/year of RGGI revenue would be allocated to the Community Flood Preparedness Fund and over \$3M/year would be available for administration and climate change planning.

The proposed Commonwealth Flooding Board would be comprised of 10 citizens appointed by the Governor and confirmed by the General Assembly and the director of the new Commonwealth Flooding Department. Appointments shall be staggered to provide stability and long-range planning beyond the tenure of any single governor. Ex officio members would include the Secretary of Natural Resources, Secretary of Transportation, Secretary of Public Safety, and Secretary of Commerce.

The Board would be supported by a new Commonwealth Flooding Department (CFD). The Board would direct the CFD's work program to include data collection, planning, research, analysis, modeling, and project management. CFD could also serve as the nonfederal sponsor for USACE Civil Works projects. The CFD would include the Director plus a minimum of eight staff with combined expertise in floodplain management, stormwater modeling, civil engineering, coastal engineering, geology, nature-based green infrastructure, land use planning, economics, benefit-cost modeling, environmental policy development, environmental justice, and financial management (grant management, bond ratings, investment strategies). The CFD would be funded by the estimated \$3M/year in RGGI auction proceeds identified for administration and climate change planning and mitigation activities.



Incorporating Resilience into SMART SCALE

Background:

SMART SCALE is the Commonwealth of Virginia’s method for prioritizing transportation projects for state funding. Created by the General Assembly and administered by the Commonwealth Transportation Board (CTB), SMART SCALE uses a set of objective criteria to score and rank candidate projects. §33.2-214.1 of the Code of Virginia, which covers SMART SCALE, sets the minimum criteria for scoring projects, which include congestion mitigation, economic development, accessibility, safety, and environmental quality. The CTB has also adopted land use as a factor for quantifying project benefits. The sum of the project benefits is compared with the project’s SMART SCALE cost to determine its final score. Specific measures currently included in the SMART SCALE scoring include:

Table 1: SMART SCALE Factors

Factor Area	Measure Name
Safety	Equivalent property damage only (EPDO) of Fatal and Injury Crashes
	EPDO Rate of Fatal and Injury Crashes
Congestion mitigation	Person Throughput
	Person Hours of Delay
Accessibility	Access to jobs
	Access to jobs for disadvantaged persons
	Access to multimodal choices
Environmental quality	Air quality and environmental effect
	Impact to natural and cultural resources
Economic development	Project support for economic development
	Intermodal access and efficiency
	Travel time reliability
Land use	Transportation-efficient land use
	Increase in transportation-efficient land use

Planning, designing, and building for resiliency is a major challenge for communities across Virginia. In coastal areas, sea level rise and changing precipitation patterns are causing more frequent flooding. Similar impacts are also being felt in communities with riverine flooding. It is critical that future climatic conditions be accounted for in the design and construction of new transportation projects.

Addressing these impacts through more resilient project designs increases the costs of transportation projects – they are built higher, have more stormwater capacity, stronger materials, etc. Under the current SMART SCALE system, a project without resilient features would score higher because it has a lower cost. The same project with resilient features would be penalized for the higher cost but would not see any benefit in the scoring for being resilient. Resiliency could be incorporated into SMART SCALE using metrics such as elevation compared to base flood elevations and future sea levels, stormwater management capacity, tolerance for extreme heat or cold, etc.



The CTB has created a system of four weighting frameworks for different areas of the Commonwealth based on their needs and character. The weighting framework categories for FY22 are listed below.

Table 2: FY22 SMART SCALE Weighting Frameworks

Factor	Congestion Mitigation	Economic Development	Accessibility	Safety	Environmental Quality	Land Use
Category A	45%	5%	15%	5%	10%	20%
Category B	15%	20%	25%	20%	10%	10%
Category C	15%	25%	25%	25%	10%	
Category D	15%	35%	15%	30%	10%	

A resiliency factor could be applied in the same way depending on the needs of a given region.

Recommendations:

§33.2-214.1 should be amended to include resiliency in SMART SCALE. Specifically:

- 1) §33.2-214.1(A) should be amended to read “The General Assembly declares it to be in the public interest that a prioritization process for projects funded by the Commonwealth Transportation Board be developed and implemented to improve the efficiency and effectiveness of the state's transportation system, transportation safety, transportation accessibility for people and freight, *current and future transportation resiliency*, environmental quality, and economic development in the Commonwealth”
- 2) §33.2-214.1(B)(1) should be amended to read ““The prioritization process shall be based on an objective and quantifiable analysis that considers, at a minimum, the following factors relative to the cost of the project or strategy: congestion mitigation, economic development, accessibility, safety, and environmental quality, *and resiliency.*”

The CTB and the Virginia Department of Transportation should adopt the following definition of resiliency: *“The ability to anticipate, prepare for, or adapt to conditions; or withstand, respond to, or recover rapidly from disruptions; including the impacts of sea level rise, extreme weather events, flooding, or other natural disasters.”*



Building for Future Precipitation

Stormwater infrastructure that collects and directs rainwater away from roads and buildings is sized based on historical rainfall events. For example, the amount of rain that falls within 24 hours is measured in one place over many years to establish how often the location receives different amounts of rain. Then a policy is established for what size stormwater system should be built. The policy should balance the upfront cost of building larger stormwater pipes and pumps and the long-term, community cost of flood damage when a rainfall event occurs that exceeds the capacity of the stormwater system.

Many localities require new developments to build stormwater drainage systems with the capacity to handle a 25-year storm. In Hampton Roads, a 25-year design storm is 6.99 inches of rain in 24 hours based on the current standard for rainfall data – a National Weather Service report called Atlas 14. The Atlas 14 report has not been updated for the Hampton Roads region since 2006. However, Virginia Beach with their consultant, Dewberry, analyzed local rainfall data and determined that in recent years larger storms were happening more frequently. The City adopted a local standard in June 2020 based on Atlas 14 plus a 20% increase. Now, a development that has to build a drainage system to handle a 25-year storm must have the capacity for an 8.39 inch rainfall event instead of 6.99 inch event.

If other localities in Hampton Roads localities continue to design drainage systems based on the Atlas 14 report, the drainage systems will fail more frequently and the community will have increased flooding. If the trend of larger, more frequent rainfall events accelerates, then the frequency and amount of flood damage will significantly increase over time. Updating Atlas 14 by including rainfall events after 2006 in the analysis would only address part of the problem. To size stormwater systems for the future, the design standard must include rainfall projections that reflect emerging climate trends.

Hampton Roads localities should pursue local, state and federal solutions to this challenge. Each solution has a different timeline but pursuing all of them concurrently would be a “no regrets” approach to reduce flood damage.

Recommendations:

Local Approach

All Hampton Roads localities should consider adopting the Virginia Beach design criteria of Atlas 14 plus 20%. The rainfall data used to establish this policy covers all of Hampton Roads so it is appropriate to use throughout the region. The new design criteria can be adopted by local ordinance and quickly require new developments to build the drainage capacity needed for the next 30 years instead of being undersized as soon as it is built. The region could develop a memorandum of agreement with state agencies, especially VDOT, requiring them to follow local design standards when constructing projects in the region.

State Approach

Virginia should invest in the research to analyze recent rainfall patterns across the entire state to determine future rainfall predictions. If there appears to be a pattern of increased or more intense rainfall in some parts of the state, then a new design standard should be established based on that data. The new standard should be incorporated into all the state agency programs such as DEQ’s stormwater regulation and VDOT’s construction projects. Key elements of this research endeavor and policymaking initiative should include:



1. Analysis of rainfall trends across the entire state
2. Analysis of changing rainfall trends to develop a predictive model
3. Evaluation of the uncertainty of the predictive model
4. Consideration of an iterative policy development including the concept of adding a safety factor to the existing design standard (Atlas 14 + 20%) until additional rainfall data establishes trends with less uncertainty
5. Commitment to reevaluate the data at least every five years

The State Approach could be implemented by tasking the VDOT Research Council or by funding the expansion of Chesapeake Bay Program's research on rainfall trends to include the whole state, instead of only studying the portion in the Chesapeake Bay watershed.

Federal Approach

Hampton Roads localities should encourage their congressional delegation to fund the National Weather Service to update its methodology for analyzing rainfall. Additional funding should be provided to update Atlas 14 every five years and include analysis of rainfall trends and climate projections to provide forecasts for changes expected in the next 10-30 years. Specifically, an appropriation under the Water Resources Development Act could be directed to support this approach.



Real Estate Disclosures for Flooding

Real estate transactions in Hampton Roads are occurring without disclosing whether a property is vulnerable to flooding or has already experienced damage from a flood. In many cases, prospective or recent buyers do not become aware of these issues until they are required to buy flood insurance policies as part of their mortgage agreements. If this occurs during or prior to closing, it may result in a cancelled sale; if it occurs after a transaction has been made, then the new owner is suddenly subjected to additional costs, which can be quite high in some cases. Virginia's residential property disclosure requirements should be amended to require the seller to disclose information about a property's vulnerability to flooding and any history of flood damage.

Disclosure requirements for sellers of residential property are governed by the Virginia Residential Property Disclosure Act (Code of Virginia §§ 55.1-700 through 55.1-714). The Act currently mandates four disclosures for residential properties:

- 1) If a residential dwelling is in a military air installation noise zone or accident potential zone
- 2) Pending enforcement actions or violations of the Uniform Statewide Building Code or local zoning ordinance
- 3) If a residential dwelling was previously used to manufacture methamphetamine and has not been cleaned up in accordance with state law
- 4) The long-term maintenance and inspection requirements of any privately owned stormwater management facilities

The first required disclosure is based on a community's official zoning map, while the other three are based on the seller's "actual knowledge" of the issues in question. All other potential issues with a residential property fall under the Commonwealth's policy of *caveat emptor* – let the buyer beware. Vulnerability to flooding and past flood damage is one of the issues that falls under *caveat emptor*.

Many nondisclosures can be investigated by a prospective owner, including whether a property is located in a flood zone. However, information on previous flood damage or flood claims is typically not available without the seller giving the information to the prospective buyer. Without the owner's consent, due diligence is not sufficient to determine whether a property has flooded in the past or if flood insurance claims have been filed. The property's flood history can have significant financial impacts on new homeowners. For example, if FEMA has designated a property as Severe Repetitive Loss due to a history of flood insurance claims, that will cause a significant increase in flood insurance premiums.

Recommendations:

Virginia's residential property disclosure requirements should be amended to require the seller to disclose information about a property's vulnerability to flooding and any history of flood damage or flood insurance claims. Such information would allow prospective homeowners to make informed decisions about property purchases. Amendments to the Virginia Residential Property Disclosure Act should include:



- 1) Removing § 55.1-703(B)(9) and creating a new section requiring disclosure of whether a property is located in a special flood hazard area modeled after the requirement for military air installation zones
- 2) Including a provision requiring the seller to disclose actual knowledge of flood damage to a residential dwelling
- 3) Including a provision requiring the seller to disclose actual knowledge of prior flood insurance claims, to be provided by the flood insurance provider

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**HAMPTON ROADS PLANNING DISTRICT COMMISSION
RESOLUTION 2020-XX**

**RESOLUTION OF THE HAMPTON ROADS PLANNING DISTRICT COMMISSION
ENCOURAGING LOCAL GOVERNMENTS IN HAMPTON ROADS TO CONSIDER ADOPTING
COMMERCIAL PROPERTY ASSESSED CLEAN ENERGY FINANCING PROGRAMS**

Whereas, the General Assembly first authorized the creation of local clean energy financing programs in 2009;

Whereas, in 2019, the General Assembly expanded the authority of local clean energy financing programs to also fund improvements for resiliency and stormwater management;

Whereas, in 2020, the General Assembly granted the Department of Mines, Minerals and Energy the authority to serve as a state sponsor for a clean energy financing program;

Whereas, § 15.2-958.3 of the Code of Virginia, 1950, as amended, enables localities, by ordinance, to facilitate loans made by qualified lenders to non-residential property owners to finance initial acquisition and installation costs of clean energy, resiliency, and stormwater management improvements, and for such loans, inclusive of principal, interest, and any financed fees, costs or expenses, to be (i) repaid through special assessment payments either directly to the lender or through the locality to the lender and (ii) secured by a voluntary special assessment lien on the subject property with such lien having the same priority status as a property tax lien against real property;

Whereas, Commercial Property Assessed Clean Energy (C-PACE) is an innovative and tested tool that encourages private sector investment in energy use reductions in many cases where traditional commercial financing instruments are often not feasible;

Whereas, facilitating improvements to non-residential properties that involve clean energy, energy efficiency, water efficiency, resiliency, or stormwater improvements for both existing properties and new construction promotes the general welfare; now, therefore;

BE IT RESOLVED that the Hampton Roads Planning District Commission hereby:

1. Encourages localities in Hampton Roads to consider adopting ordinances to establish local C-PACE programs;

2. Recommends that localities in Hampton Roads coordinate with the Department of Mines, Minerals and Energy to determine whether local administration or participation in the state program is the preferred option for managing a C-PACE program;
3. Directs the HRPDC Coastal Resiliency Committee to keep apprised of developments related to C-PACE programs, legislation, and regulations in the Commonwealth and provide updated information and recommendations to the Commission and to its member localities as appropriate.

APPROVED AND ADOPTED by the Hampton Roads Planning District Commission this 15th day of October 2020.

Michael Hipple
Chair

Robert A. Crum, Jr.
Executive Director/Secretary

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