

**THE DRAFT SUMMARY OF THE MEETING OF THE
HRPDC COASTAL RESILIENCY COMMITTEE
September 28, 2018**

1. Summary of the June 22, 2018 Meeting of the Hampton Roads Coastal Resiliency Committee

The summary and attendance record for the June 22, 2018 meeting of the Hampton Roads Coastal Resiliency Committee were approved as distributed.

2. Public Comments

There were no public comments.

3. Design Storm Standards and Coordination with VDOT

Dr. Michael Fitch, Deputy Director of Research for the Virginia Transportation Research Council, presented on VDOT's recent research efforts to incorporate climate change impacts in transportation infrastructure design. Mr. Kendal Walus, VDOT State Structure and Bridge Engineer, was also in attendance and prompted research in this area by asking how climate change would impact bridge design. Dr. Fitch stated their first research objective is to evaluate the existing Virginia Beach Rainfall study conducted by Dewberry. A University of Virginia (UVA) team, led by Dr. John Goodall, is reviewing the Dewberry study, as well as other precipitation studies, to validate the methodology and findings. UVA will be extending the analysis window from 40 to 100 years to account for the longevity of VDOT projects.

The second VDOT research objective is to test the relationship between increased rainfall, runoff, and watershed area. UVA is developing a hydrodynamic model, calibrated with USGS gages, to assess how storm events influence runoff in the Blackwater River watershed. UVA researchers automated National Weather Service precipitation forecast updates in the model to drastically reduce computation time.

Mr. Greg Johnson, City of Virginia Beach, suggested running two to three years of historical data to improve model accuracy. Ms. Fran Geissler, James City County, asked when VDOT specifications may be changed as a result of this analysis and noted development costs will increase. Mr. Walus stated that the timeline is unclear, but VDOT will be working towards changing the standards. Mr. Thomas Leahy, City of Virginia Beach, asked if VDOT will be issuing a statement recognizing the need for new standards. Dr. Fitch replied that the recommendations resulting from the UVA study will be shared through a public document.

Mr. Johnson asked about the level of support for regional standards to address sea level rise and increased rainfall. Mr. Ben McFarlane, HRPDC, replied that the Coastal Resiliency Committee has expressed support for 1.5ft and 3ft of sea level rise by 2050 and 2080 respectively. The sea level rise curves and policy document will be discussed with the Chief Administrative Officers subcommittee later this fall, and if endorsed be shared with the Commission for approval.

Mr. Mark Bellamy, York County, suggested crediting resiliency initiatives when grading infrastructure projects. Mr. Kyle Spencer, City of Norfolk, stated that the timeline for spending funds to re-pave Hampton Blvd is too short to also raise the road. Dr. Fitch replied that he and Mr. Walus will pass along their concerns to VDOT.

Mr. Sam Belfield, HRPDC, emphasized the need for more guidance on integrating sea level rise and precipitation research with expensive bridge and road design. Mr. Leahy thanked VDOT and the current administration for recognizing this issue, and suggested considering that future roads may need to be built as levees. Mr. Eric Martin, City of Chesapeake, stated that Chesapeake agrees with Dewberry's recommended 20% increase in existing guidance for rainfall intensity and is planning to begin socializing the results. In response to a question from Mr. Mohammad Shar, City of Newport News, Mr. Johnson verified the 20% increase will apply to new subdivisions in Virginia Beach.

Mr. Spencer noted that the U.S. Army Corps of Engineers (USACE) curves were excluded from the VDOT analysis; however, these curves were required in Norfolk's 3x3x3 Coastal Storm Risk Management study. Mr. McFarlane suggested asking USACE if the curves will be updated, and noted the USACE calculator includes recent NOAA curves.

Mr. McFarlane proposed organizing a workgroup meeting with VDOT to determine paths for integrating sea level rise and increased precipitation in both policy and engineering. Mr. Robert Martz, HRSD, also suggested inviting the UVA research team.

4. DCR Dam Safety, Flood Prevention and Protection Assistance Fund Grants

Mr. Ben McFarlane, HRPDC, reported that the Virginia Department of Conservation and Recreation (DCR) awarded the HRPDC funding for two projects through their Dam Safety, Flood Prevention, and Protection Assistance Fund Grants. The HRPDC received letters in late July awarding \$30,000 to the flood insurance outreach campaign and \$20,000 for the development of a flood insurance calculator. HRPDC staff have initiated discussions with ODU regarding design of the flood insurance calculator. The funds must be spent within one year of the contract signing. Mr. McFarlane also stated he will identify a point of contact for the City of Chesapeake to brief the Committee on their project that was awarded DCR funding.

5. Flood Insurance Outreach

Ms. Katchmark and Ms. Katie Cullipher, HRPDC, provided an update on the regional flood insurance outreach campaign development. Ms. Katchmark shared that the six members of the advisory group, including staff from Chesapeake, James City County, Hampton, Poquoson, Portsmouth, and Virginia Beach, provided input on the campaign direction and reviewed flood insurance outreach website.

Ms. Cullipher summarized two original concepts that Red Chalk Studios presented to the advisory group, Fact Up Hampton Roads and Get Flood Fluent. Elements from both concept proposals are integrated in the final design. Ms. Cullipher provided a demonstration of the draft website. The responsive design website includes facts about flood insurance and why Hampton Roads residents should consider purchasing a policy, as well as a quiz to address common misconceptions about flood insurance. The website is anticipated to launch by the end of October.

Ms. Cullipher highlighted customizable mailers and news releases will be shared with each locality and a testimonial video with residents of Virginia Beach and Poquoson is under development. HRPDC staff will distribute a list of locality website links to the Committee to review for inclusion on the “Who is behind this campaign?” page. Ms. Fran Geissler, James City County, requested the graphic displaying each localities height above sea level be revised to more accurately reflect flood risk in James City County. Ms. Cullipher stated the chart will be revised before the website is live.

Ms. Katchmark asked whether the Committee would like to spend all available funds for the campaign within this year, or reserve funds for next year given the awarded DCR funding. The Committee endorsed spending all available funds within this fiscal year.

6. Tracking Resiliency Projects in Hampton Roads

Mr. McFarlane updated the Committee on the current status and next steps of the regional resiliency project tracking initiative. Resilience projects, programs, and policies have been submitted by 6 localities, including York County and the cities of Hampton, Newport News, Norfolk, Poquoson, and Virginia Beach. The City of Williamsburg indicated that they have no relevant projects to submit at this time. HRPDC staff will begin compiling the information submitted into a geospatial format for integration with an interactive web application. A draft version of the web application will be shared with the Committee in December.

Ms. Meg Pittenger, City of Portsmouth, asked if soft projects, such as a resiliency plan, should be included. Mr. McFarlane confirmed plans, community meetings, and other coordination efforts can be included. Ms. Mary-Carson Stiff, Wetlands Watch, suggested considering a full summary document that could be downloaded by locality, in addition

to the individual project view. Mr. Spencer asked if information regarding the stage of the project is included, and how often the database will be updated. Mr. McFarlane responded that projects will have an attribute distinguishing status, and the project inventory will likely be updated on an annual basis.

7. Estimating First Floor Elevations - CZM Grant

Mr. McFarlane briefed the Committee on the context and motivation for the Coastal Zone Management grant first floor elevations project. The primary objectives of the project are to develop a regional geospatial elevation certificate database and test predictive methodologies for estimating first floor elevations (FFE).

Ms. Ashley Gordon, HRPDC, summarized the project progress to date. HRPDC staff have developed a GIS database with information from approximately 1,900 elevation certificates covering 9 localities. Elevation certificates have been joined with corresponding parcels, including building attributes and tax assessment information, as well as building footprints where available. Ms. Gordon highlighted preliminary findings from the multivariate regression analysis, which uses elevation certificate information to predict FFE. The initial results suggest foundation type, year built, and flood zone influence estimates of building FFE. Mr. McFarlane concluded that the second phase of the first floor elevation project will begin October 2019. Phase two will consist of continuing to refine predictive methodologies, expanding the elevation certificate database, and conducting flooding and sea level rise vulnerability assessments with estimated elevations.

Ms. Pittenger shared that the U.S. Army Corps of Engineers are currently developing a building FFE database for the City of Portsmouth. Mr. Eric Martin, City of Chesapeake, stated adjacent neighborhoods within Chesapeake have noticeably different FFEs as a result of whether the structures are pre- or post-firm. Mr. McFarlane concluded that the finished report will be shared with the Committee for review, and HRPDC staff plan to host the elevation certificate database on the new regional GIS portal, HRGEO.

8. Regional Flood Sensor Proposal

Ms. Katchmark updated the Committee on the development of a proposal to establish a regional network of roadway flood sensors. A Coastal Resiliency Working Group meeting was held on August 24, 2018, to discuss elements of the proposal, including the types of sensors, locations, and data communication. HRPDC staff are working to incorporate the sensor network into the larger regional broadband Smart Infrastructure proposal. The Smart Regional Conference Infrastructure Challenge Presentations will be held on October 25th in Columbus, Ohio. Ms. Katchmark will

organize a small technical working group to develop various options for the Committee to consider.

9. HRPDC Coastal Resilience Subcommittee

Mr. McFarlane briefed the Committee on the discussions and outcomes of the first two Commissioners' Coastal Resilience Subcommittee meetings in August and September. The Subcommittee and HRPDC staff are currently drafting a letter to send to the region's congressional delegation requesting assistance with an update of NOAA Atlas 14, which is used to specify design storm standards. The Subcommittee also previewed the Flood Insurance website and suggested diversifying outreach methods to reach audiences with limited internet access. Future items for Subcommittee discussion include identifying methods for crediting resiliency in Smart Scale project scoring and gaining support for the Regional Greenhouse Gas Initiative (RGGI). The Subcommittee is planning to continue meeting on a monthly basis.

10. FY20 Coastal Resiliency Program Budget and Work Program Priorities

Mr. McFarlane reviewed the proposed FY20 Coastal Resiliency Program Budget. The technical staff budget increased funding to support 1.2 FTEs. The budget includes items for year three of USGS Subsidence Monitoring, a potential SeaGrant Intern, continued media campaign and content development for regional flood insurance outreach, and additional project support. Ms. Geissler asked how the Project Fund of \$100,000 was determined. Ms. Katchmark responded that this number is a rough estimate that can be discussed further. Ms. Katchmark also confirmed the localities have thus far collectively contributed approximately \$52,000 to the flood insurance campaign.

The eight committee members in attendance unanimously supported the budget as distributed. Remaining votes from committee members who were not present will be collected via email in accordance with the committee's guidelines.

11. Update on Federal and State Efforts Related to Sea Level Rise and Recurrent Flooding

Mr. McFarlane provided several Federal and state legislative updates to the Committee.

- The National Defense Authorization Act for FY2019 includes two provisions that may provide assistance to localities for infrastructure projects:
 - Defense Access Roads Program: Congressmen Taylor proposed an amendment that would add "closures due to sea level rise and flooding," to the list of eligible impacts and authorize funding of projects that repair or mitigate the risk of flooding and sea level rise to highways.

- The Defense Community Infrastructure Pilot Program was created to allow DOD funds to address deficiencies in community infrastructure. However, no funds have been appropriated. Future lobbying efforts could address this funding issue.
- The Water Resources Development Act currently under consideration in Congress includes authorization for U.S. Army Corps of Engineers 3x3x3 studies for coastal Virginia.
- Authorization of the National Flood Insurance Program has been extended to November 30, 2018.
- The Virginia November 2018 ballot will include a proposed Constitutional Amendment that would allow localities “to provide a partial tax exemption for real property that is subject to recurrent flooding, if flooding resiliency improvements have been made on the property.”
- The 2015 Virginia Building Code update went into effect on September 4, 2018, and applies V flood zone standards in Coastal A flood zones for new construction and substantial improvements. Localities have one year to come into compliance.

Ms. Stiff stated that FEMA is planning a Flood Insurance Roundtable discussion in the Hampton Roads region, tentatively set for December 4, 2018. Ms. Stiff will follow-up with an email requesting input on topics of interest.

12. Updates on PDC and Local Efforts Related to Sea Level Rise and Recurrent Flooding

Mr. Leahy stated the City of Virginia Beach is continuing to move forward on modeling for the sea level rise study. Discussions with the City Council will begin in early 2019. Mr. Johnson also shared that Charleston, SC is interested in estimating the cost of no action regarding sea level rise mitigation.

Ms. Geissler stated the new County Administrator for James City County starts October 1st and will likely be invested in resilience activities.

Mr. Spencer announced that 60% of the design is complete for the City of Norfolk’s Ohio Creek Watershed project, with final designs anticipated towards the end of the year. The current environmental permit documentation is open for public comment.

Mr. Martin stated the City of Chesapeake is working with the Emergency Management Department to place updated Know Your Zone stickers on trash cans.

Ms. Katchmark announced the Regional Environmental Committee will be held Thursday, October 4th at the HRPDC Regional Boardroom. Stewart Baker, Hurricane Program Manager for the Virginia Department of Emergency Management, will be discussing the recent evacuation for Hurricane Florence.

Ms. Stiff reported the Virginia Floodplain Management Association's Hampton Roads Fall Workshop will be held Thursday, October 11th, at the Northampton Community Center in Hampton. The 2018 Catch the King volunteer event will be held Saturday, October 27th, and registration is open at kingtide757.com.

Dr. Michelle Covi, ODU/Virginia Sea Grant, shared registration is open for the Fall Adaptation Forum, which will be held on Friday, October 19th, at Clark Nexsen in Virginia Beach.

13. Other Matters

The next meeting of the Coastal Resiliency Committee will be held December 14, 2018.