THE DRAFT SUMMARY OF THE MEETING OF THE
HRPDC COASTAL RESILIENCY COMMITTEE
September 24, 2021

Attendance

A complete attendance list is available. In addition to several non-voting committee members and other interested parties, the following voting members participated electronically:

Coastal Resiliency Committee Voting Members:

Bob Baldwin, PO  Carolyn Murphy, WM
Doug Beaver, NO  Brent Payne, GL
Crystal Bloom, CH  Michael Woolson, JC
Tammie Clary, SM

1. Summary of the June 25, 2021 Meeting of the Hampton Roads Coastal Resiliency Committee

The summary and attendance record for the June 25, 2021 meeting of the Hampton Roads Coastal Resiliency Committee were approved as distributed.

2. Public Comments

There were no public comments.

3. USGS Subsidence Monitoring Project Update

Mr. Jim Duda, USGS, provided an update to the Committee on the USGS subsidence monitoring efforts in the Hampton Roads region. USGS is mapping land elevation change using geodetic surveying and established a network of Class B or greater survey benchmarks designed for Global Navigation Satellite Systems (GNSS) occupation in 2017 and 2018. Four of the five planned occupations of the benchmarks have been completed, with the last campaign planned for March 2022. The final network configuration includes 26 benchmarks consisting of 4 subsidence piers with continuous GPS, 6 concrete surface monuments, and 16 deep rods. Surveys have been conducted once a year since 2018 with 24-hour data collection that is post-processed using OPUS-Projects. Once all remaining survey data is collected, land surface motion velocities and relative differences in vertical land motion will be calculated across the Hampton Roads region.

Mr. Duda emphasized the importance of subsidence monitoring using geodetic surveying and ground truthing, considering limitations with other methods. Challenges with this data collection effort have included suboptimal conditions for benchmark locations, NASA subsidence pier data becoming unavailable, and CORS stations not always being healthy and available at the times of the surveys. Future research related to this effort could include tying together subsidence monitoring with aquifer compaction, water levels, and remotely sensed information. Options could also be discussed for more beneficial InSAR ground truthing methods with geodesists and academic institutions and the inclusion of benchmarks at different depths within the same
vicinity. Ms. Whitney Katchmark, HRPDC, noted that talking with the InSAR community about next steps related to this effort would be helpful.

4. **FEMA Building Resilient Infrastructure and Communities (BRIC) Program**

Mr. Robbie Coates, Virginia Department of Emergency Management, presented on the FEMA Building Resilient Infrastructure and Communities (BRIC) Program funding opportunity and Virginia’s results from the first grant cycle. VDEM administers the BRIC Program for Virginia, and this year there is $1 billion available nationally for the grant program. BRIC project scoring involves both technical and qualitative criteria. This includes consideration of the FEMA defined community lifelines, and projects that addressed these tended to score higher. VDEM has also been building-off of the Heath Equity Workgroup established by the Governor’s Office and Health360 tool to evaluate population vulnerability and flood hazard risk. A series of local workshops were recently held by VDEM to help localities develop grant applications.

In FY20, Virginia was one of 5 states to submit over $200M in project applications for BRIC. FEMA received 1,227 grant applications totaling over $4 billion nationally. Each state receives a $600,000 set aside, and Virginia just received this base minimum for BRIC and no other additional competitive grant applications were selected. States that received competitive grant funding had adopted building codes, addressed more than one lifeline and multiple benefits, and had a building code effectiveness score between 1-5. This grant cycle, the FEMA state set-aside has been increased to $1 million. Virginia is also set to receive $62 million through the COVID-19 Hazard Mitigation Grant Program (HMGP) and will be evaluating FY20 BRIC applications for consideration for HMGP. The focus will be on projects that are in vulnerable population areas based on the Health360 Analysis. The BRIC, Flood Mitigation Assistance (FMA), and DR 4602 HMGP application periods are open and the deadline to apply is November 10, 2021. Mr. Coates noted that projects not selected may get funded in the future, and VDEM is looking at building additional capacity to support hazard mitigation efforts and technical assistance.

Ms. Katchmark asked about the outcomes of the VDEM workshops conducted this summer and the VDEM scoring process compared to FEMA scoring for the grant programs. Mr. Coates noted that the workshops helped identify high priority issues for communities and a follow-up report will be completed. VDEM leadership has also been in communication with FEMA leadership regarding scoring challenges for projects. Mr. Skip Stiles, Wetlands Watch, noted that there is a need for a state coordinating entity at the cabinet level to align VDEM programs and the Community Flood Preparedness Fund, as well as other efforts.

5. **FY23 Coastal Resiliency Program Budget**

The FY23 Coastal Resiliency Program budget was originally listed as item 6 on the distributed meeting agenda. Mr. Ben McFarlane, HRPDC, briefed the Committee on the FY23 budget. The budget includes funding for technical staff, USGS subsidence monitoring, a potential Sea Grant fellow, flood insurance outreach, and a project fund. The project fund, currently budgeted at $50,000, is designed to help support various projects with Committee approval as opportunities arise. The overall budget has decreased from last year due to reserve funding ($30,000) being applied as a result of fewer agency expenses in the previous fiscal year. The relative contributions by each locality based on population have been modified based on the 2020 Census data.
The budget has been distributed for review to Committee voting members and the vote will be conducted via email. Committee members should share any questions or concerns regarding the budget with Mr. McFarlane and Ms. Katchmark.

6. **Resilience Project Tracking Update**

The resilience project tracking update was originally listed as item 5 on the distributed meeting agenda. Ms. Ashley Gordon, HRPDC, briefed the Committee on recent updates to the HRPDC resilience project, programs, and policies tracking initiative and a new dashboard currently under development. The current resilience project inventory included in the dashboard viewer, hosted on HRGEO.org, was last updated in February 2021. HRPDC staff are coordinating with locality staff to update the inventory, including changes to existing projects and documenting new projects that local staff were submitting as part of the Virginia Coastal Resilience Master Plan resilience projects survey. Over half of localities have reviewed the current data. Based on responses received, 24 projects have advanced status and over 160 new projects will be added to the inventory. This includes around 130 projects submitted by Hampton. Following the next update, the regional project inventory will have over 600 projects.

Locality fact sheets describing resilience programs and policies, hosted in a StoryMap on HRGEO.org, have also been updated. Since the fact sheets were published in February 2020, James City County has advanced to a Class 5 in the Community Rating System (CRS), and Chesapeake has advanced to a CRS Class 7. Counts of active policies for each locality have also been updated based on redacted policies data available through the OpenFEMA data portal.

HRPDC staff are developing a new ArcGIS Online dashboard viewer that summarizes previous flood insurance claims and flooding events across Virginia. The National Flood Insurance Program (NFIP) redacted claims data is available through the OpenFEMA data portal, and the flooding events are accessible through the NOAA Storm Events Database. Ms. Gordon shared a draft version of the dashboard that is currently available on ArcGIS Online. NFIP claims and flooding events can be viewed by date and an interactive map displays locality summaries. Before the dashboard is made available on HRGEO.org, Committee members are encouraged to reach out to HRPDC staff with questions or suggested revisions. Mr. McFarlane also noted that HRPDC staff are intending to use the OpenFEMA portal to track changes in flood insurance policies over time in support of the GetFloodFluent.org outreach efforts.

7. **Flood Insurance / Get Flood Fluent Update**

Ms. Gordon provided an overview of FEMA’s new methodology to calculate flood insurance, Risk Rating 2.0. FEMA is referring to Risk Rating 2.0 as Equity in Action because the new methodology is designed to better reflect a structure’s flood risk and establish more equitable rates by factoring in building replacement cost. FEMA will no longer base a structure’s flood risk primarily on flood zone and will instead use several geographic factors unique to a property’s location, such as distance to water and land elevation. A greater range of flood frequencies and flood hazards than just the 1% annual chance will also be considered in the rating process. Property characteristics, such as type of use and foundation type, will also be factored into the rating process. Discounts are available for proper flood venting and elevating the machinery and equipment above the first floor of the structure. Discounts through the Community Rating System (CRS) will still apply and will be expanded to all insured structures in a locality. Policies may experience up to the statutory limit of an 18% increase in premiums each year until the new rate
with the CRS discount applied is achieved. Flood Insurance Rate Maps (FIRMS) will also still be used for floodplain management and identifying mandatory purchase requirements.

Based on data released by FEMA, approximately 47% of policies in the Hampton Roads region are expected to see immediate decreases in premiums and 48% are expected to see increases on average of $10 or less per month. 4% of policies are expected to see increases on average between $10 and $20 per month, and 1% of policies are expected to see increases on average of greater than $20 per month. Summaries of expected premium increases and decreases are available at the individual locality level. The first phase of Risk Rating 2.0 will go into effect October 1, 2021. New policies will be subject to the new rating methodology and existing policyholders eligible for renewal will be able to take advantage of immediate decreases. All remaining policies renewing will be subject to the new rating methodology beginning April 1, 2022.

The regional flood insurance calculator available on GetFloodFluent.org will no longer be publicly accessible as of October 1, 2021, with the implementation of Risk Rating 2.0. HRPDC staff are evaluating how to redesign the calculator to align with the new FEMA rating methodology. A new outreach rack card covering all six categories creditable under CRS outreach efforts is available on the GetFloodFluent.org website as part of the campaign toolkit. Wetlands Watch has been tracking Risk Rating 2.0 updates and has resources available on their website.

8. Resilient Design Standards Update

Mr. McFarlane briefed the Committee on the HRPDC’s efforts to develop resilient design standards that account for the increasing risk of tidal, rainfall, and storm surge flooding. The resilient design guidelines under development for stormwater management focus on tailwater elevations, precipitation, and design storms that pair the joint probability of tidal and rainfall events. HRPDC staff previously shared tables of tailwater elevation values for various combinations of sea level rise and storm recurrence intervals with each locality for review.

Regarding precipitation, a new online tool (available at https://midatlantic-idf.rcc-acis.org/) developed by MARISA for the Chesapeake Bay Program and Virginia provides climate-informed IDF curves and associated change factors for precipitation gauge stations. Change factors were calculated for counties and county equivalents for a range of return periods, emissions scenarios, and two time periods. Mr. McFarlane noted that NOAA Atlas 14 will be updated; however the change values in the tool are based on the current Atlas 14 values. HRPDC staff are recommending using a single multiplier for each locality by averaging the 2020-2070 change values for all return periods and both emissions scenarios (RCP 4.5 and 8.5). HRPDC staff are also recommending using the 50th percentile value if the locality has less than or equal to 10% impervious area and using the 75th percentile for localities with greater than 10% impervious area. HRPDC staff will distribute the multipliers and corresponding rainfall depths for review by the Committee. Ms. Ginny Snead, AMT, asked how the impervious area thresholds were selected, and Mr. McFarlane noted these are based on professional judgement by HRPDC staff and feedback is welcome on the thresholds selected.

Following the approach developed through the Virginia Beach Public Works Design Standards Manual, design storms have been defined as pairs of tidal and rainfall events. Mr. McFarlane noted this will also be included in a revised design standards packet that will be shared with localities for review. Depending on feedback received, the Committee could consider making a recommendation at their next meeting that would be shared with Commission for action in the first quarter of 2022. Ms. Erin Rountree, City of Suffolk, asked if there are maps available of the
tidal versus upland thresholds, and Mr. McFarlane noted a map of where the joint probability events would apply will also be distributed with the design standards packet.

9. **Virginia Coastal Resiliency Master Plan**

Ms. Katchmark participates in the Virginia Coastal Resiliency Master Plan Technical Advisory Committee (TAC) and briefed the Committee on recent updates regarding the master planning effort. The next TAC meeting will be held on October 7, 2021, and several neighborhood outreach meetings have occurred with more planned. Ms. Katchmark noted that some of the deliverables from the master planning effort, such as the projects database, will likely be provided to Virginia DCR to maintain at the conclusion of the master planning process.

The HRPDC legislative committee has prioritized proposing the development of a Commonwealth Flooding Board. The current proposal recommends that the Board be given the authority to manage the Community Flood Preparedness Fund and oversee the development of watershed-based flood plans, following a model developed by Texas. The Board could also help improve coordination between existing state agencies and programs. Mr. McFarlane encouraged the Committee to reach out with feedback on the concept of the Board.

10. **Roadway Flooding Sensors Update**

Ms. Katchmark provided an update on the HRPDC’s contract with Xylem to develop a network of regional roadway sensors to monitor flooding. There are four different options for sensor installation and all are being considered to test as part of the pilot. Xylem will be setting up a meeting with the pilot project localities in October to discuss installation in more detail. HRPDC staff are also looking into opportunities for funding to expand the sensor network.

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

Mr. McFarlane noted the application period is now open for the second round of Community Flood Preparedness grant funding. The deadline to apply is November 5, 2021. HRPDC staff are also working to provide takeaways on resilience plans approved by Virginia DCR to assist localities with future plan approval.

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

Mr. Brent Payne, Gloucester County, stated that as of September 21, 2021, the Gloucester County Board of Supervisors adopted a 3ft freeboard standard.

13. **Other Matters**

The next meeting of the Coastal Resiliency Committee will be held in December 2021.