

**THE DRAFT SUMMARY OF THE MEETING OF THE
SPECIAL COMMITTEE ON RECURRENT FLOODING AND SEA LEVEL RISE
MAY 29, 2015**

1. Summary of the March 13, 2015 Meeting of the Special Committee on Recurrent Flooding and Sea Level Rise

The Summary of the March 13, 2015 Meeting of the Special Committee on Recurrent Flooding and Sea Level Rise was accepted as distributed.

2. Public Comments

There were no public comments.

3. Updates on University Efforts Related to Sea Level Rise and Recurrent Flooding

Dr. Michelle Covi, ODU, stated that an ODU research study on communicating nuisance flooding will be presented at the next Hampton Roads Adaptation Forum meeting in July. The study included interviews of citizens about their reactions to nuisance flooding events.

Dr. Carl Hershner, VIMS, updated the Committee on the activities of the Center for Coastal Resources Management. The Center continues to work on coastal resources management portals by incorporating sea level rise into the shoreline management area. They are also working on developing a training program for local staff on how to use the various tools in the portal. The Center is also supporting the Governor's Climate Change and Resilience Update Commission by providing forecasts of sea level rise for short and long-term planning for the Commonwealth. The Center is also working on a NSF study looking at the reactions of natural systems to climate change adaptation, including the impacts of a potential storm surge barrier across the Chesapeake Bay.

Ms. Brittany Barnes, W&M Law School, updated the Committee on several efforts from the Virginia Coastal Policy Center. The legal work group for the ODU Pilot Project continues to meet and is providing support for the upcoming strategic planning meeting for the project steering committee on June 25th. Two additional students have started working for the center. They will be working on white papers on social vulnerability and sea level rise.

4. Dutch Dialogues

The HRPDC staff updated the Committee on the upcoming Dutch Dialogues workshop. The workshop will be held in Norfolk at the Slover Library from June 19 to June 23. Teams composed of local, Dutch, and out-of-area experts will focus on three areas: the Tidewater Drive district in Norfolk, the Newmarket Creek watershed in Hampton and Newport News, and the region. Preliminary briefings have been scheduled for Saturday, June 20th, at 3 p.m. and Monday, June 22nd, at 11:00 a.m. These briefings are intended to provide an opportunity for staff from other localities to participate and ask questions about the sites. The opening and closing ceremonies are also open to the public.

5. National Disaster Resilience Competition

The HRPDC staff updated the Committee on the Commonwealth's application for the National Disaster Resilience Competition. The Department of Housing and Community Development submitted the state's Phase I application in March. The list of applicants invited to participate in Phase II is expected to be announced in the coming weeks.

6. Regional Sea Level Rise Inundation Maps

Mr. Ben McFarlane, HRPDC, updated the Committee on the status of new sea level rise inundation maps. The primary reasons for developing new maps are new elevation data and tidal surfaces. The methodology used for the maps is derived from the technique used for NOAA's Sea Level Rise Viewer. Three sea level rise scenarios (1', 2', and 3') were mapped using both Mean Higher High Water and Mean Lower Low Water as baselines. Some potential areas for improving on these maps are better incorporating hydrologic connectivity, additional post-processing, and including additional sea level rise scenarios.

The Committee discussed the maps. Dr. Hershner stated that CCRM is working on improving the sea level rise viewer that is part of the CCRM portals by incorporating storm surge impacts. The goal is to develop a tool that is acceptable for FEMA as a flood risk product.

Ms. Meg Pittenger, Portsmouth, stated that localities need the underlying data and the maps, not just a viewer.

Mr. Greg Johnson, Virginia Beach, stated that the city is looking into similar products and needs as part of its sea level rise strategy development.

Mr. Tom McNeilan, McNeilan and Associates, stated that cell size, wave height, and precipitation are important to consider. He also stated that when Fugro was working with Norfolk on its flooding studies they noticed that using Sewell's Point as a reference point understated flooding in some parts of the city. Undersized stormwater infrastructure is also an important issue.

Mr. Johnson stated that the city is looking at a probability analysis in the Lynnhaven River.

Dr. Covi stated that quantifying the uncertainty on maps is important.

Dr. Hershner stated that the sophisticated analysis needed to model all of these inputs can be done now, but that there is considerable uncertainty in projecting changes to storm frequency and patterns going forward that would outweigh the additional precision of the model.

Mr. Sam Belfield, HRTPO, suggested comparing the VIMS and PDC maps to make sure that they are consistent.

Dr. Hershner stated that the shorelines used as inputs may be the primary difference between the two. The CCRM maps use a shoreline derived from imagery, while the HRPDC maps use a shoreline derived from LIDAR data.

Mr. Belfield stated that the HRTPO will be conducting a vulnerability analysis for potential sea level rise and storm surge impacts on regional roadways for the 2045 Long-Range Transportation Plans. The HRTPO is looking at using two feet of sea level rise plus one or two storm surge scenarios. Mr. Belfield asked the Committee for input on the best storm surge scenarios to use.

Mr. Johnson suggested using different scenarios for different types of roads, such as the 10-year storm and the 25-year storm. Mr. McNeilan suggested using a framework of risk, fragility, and consequence. Ms. Gayle Hicks, Hampton, suggested using the scenarios from VDOT's design guidelines for storms. Mr. Bob Kerr, Kerr Environmental, suggested looking at a longer recurrence interval for infrastructure impacts, such as the 100-year storm surge; a shorter recurrence interval may be better for smaller projects.

7. HRPDC Work Program

The discussion of the HRPDC work program was postponed until the next Committee meeting.

8. Comprehensive Plan Requirement

The HRPDC staff briefed the Committee on new requirements for local comprehensive plans. SB14432 was passed during the 2015 General Assembly session and requires Hampton Roads localities to incorporate strategies to address sea level rise into their comprehensive plans. It also requires localities to coordinate with other HRPDC localities when doing so.

The Committee discussed how they were planning to comply with the new law and suggested that the HRPDC maintain data and information on each locality's efforts. The Committee also suggested using presentations to the Sea Level Rise Advisory Committee and Regional Environmental Committee to promote collaboration and cooperation.

Ms. Claire Jones, Suffolk, suggested developing stock language and maps for localities to use. Ms. Whitney McNamara, suggested regularly updating projections and data; she stated that Virginia Beach is waiting for its study with Dewberry to make progress before getting too specific.

Mr. Fred Brusso, Portsmouth, stated that the USACE is working on an update to Portsmouth's floodplain management plan, and the city will incorporate that plan into its comprehensive plan. The city will issue an RFP for its next comprehensive plan update in the next year or two and will be incorporating planning for sea level rise and resiliency into everything the city is doing.

9. Coastal Resiliency Grant

The HRPDC staff briefed the Committee on a new grant opportunity from NOAA for Regional Coastal Resiliency Grants. The purpose of the grant program is to develop or implement activities that build resilience of coastal regions, communities, and economic sectors to the negative impacts from extreme weather events, climate hazards, and changing ocean conditions. The focus of the program is on regional efforts. Total funding available is \$5,000,000, with a range of \$500,000 to \$1,000,000 for each selected proposal.

Dr. Joshua Behr, ODU, reported that ODU is putting together a proposal for this grant that would look at the economic impacts of recurrent flooding, such as work time lost and property damage or loss. The study will estimate current losses and project them

out with sea level rise. The goal of the study is to inform adaptation efforts by providing information on current and projected costs and benefits.

10. Hampton Roads Adaptation Forum

The next Hampton Roads Adaptation Forum will be held on July 24, 2015 at the Virginia Modeling, Analysis and Simulation Center in Suffolk. The main topic of the forum will be communicating nuisance flooding. This will be the last forum funded by the initial Sea Grant from NOAA, but the organizers (Virginia Sea Grant, Old Dominion University, and HRPDC) will be looking to identify other sources of funding to keep the forums going.

Ms. Jones stated that the annual American Planning Association-Virginia Chapter conference will be held in July in Norfolk. It will feature a track on coastal planning.

Ms. Shanda Davenport, Virginia Beach, suggested messaging as an important part to include in the forum.

Mr. David Imburgia, Hampton, stated that the last forum was interesting in that it showed that megaprojects would not necessarily cause ecological disasters – they are not a “no” right off the bat. He also suggested looking at how to zone for adaptation.

Mr. Brian Swets, Portsmouth, stated that the local speakers are better than national speakers.

Mr. McNeilan suggested looking at the interface between the natural and built environments in the past, present, and future.

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

Mr. Johnson reported on Virginia Beach’s sea level rise study with Dewberry. The study is taking a conceptual approach looking at impact assessments, with a focus on occurrence vs. consequence. The city is considering two scenarios of sea level rise, 1.5’ and 3’. The study will use risk aggregation to identify areas at risk. Once those areas are identified, the study will move into Phase II, the development of adaptation strategies, and Phase III, the development of an implementation strategy.

Mr. Brusso reported that progress has been made on the city’s legislative proposal for mandatory disclosures for real estate in the floodplain. He described it as a “non-disclosure disclosure.” It has been referred to the Senate Subcommittee for Housing. The proposal requires homeowner certification, not agent certification. The proposal is

based on the law that requires flood damage to cars to be reported. The city would like to have regional support for the proposal at the next General Assembly session.

12. Committee Comments

There were no additional comments from the Committee.

13. Other Matters

The Committee agreed with a staff proposal to rename itself as the Sea Level Rise Advisory Committee. The next meeting will be held in July at the HRPDC office in Chesapeake, Virginia. Materials will be sent in advance for review.