

**Resiliency Subworkgroup  
July 17, 2019  
Virginia Housing Center**

**Members in attendance:**

Steve Sunderman	Terrazia PC
George Homewood	City of Norfolk
Steve Shapiro	City of Hampton
Whitney Katchmark	Hampton Roads PDC
Michael Redifer	City of Newport News
Mark Dreyer	DEB
Kevin Utt	City of Fredericksburg
Kristen Owen	DCR

**Others in attendance:**

Jeff Brown	DHCD
Thomas King	DHCD
Nicole Donaldson	DHCD
Kyle Flanders	DHCD
Angela Davis	DCR
Abigail Johnson	BHCD
Paul Battaglia	Clark Nexson
Thom Stanton	Tiny Home Industry Association

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**Welcome & Introductions:**

At the beginning of the meeting, each participant was given an opportunity to introduce themselves. There were a few members present that did not attend the first meeting (Kristin Owen, Mark Dreyer, Steve Shapiro)

Mr. Brown recapped the discussions and results of the last meeting. The group previously agreed that they would work more efficiently if they focused on a couple of items at a time and had agreed leading into this meeting to focus on two “threats”, flooding and high wind events.

Mr. Brown also discussed an email he sent to the group, based on a suggestion from Mr. Homewood, with a print out of all of the code change proposals submitted in cdpVA, encouraging everyone to review the resiliency impact statements for submitted proposals to determine if they were accurately capturing impacts. The group reviewed a document submitted by Mr. Homewood that contained some questions and comments based on his review of the proposal and impact statements.

Mr. Homewood pointed out that some of his questions were related to proposed changes to the energy codes and asked for clarification on how the International Energy Conservation Code related to the state code and how the code changes relate to the model and state energy codes.

Mr. Brown provided an explanation and pointed out that the I-Codes are incorporated as part of the USBC, so the changes/improvements in each new edition of the I-Codes become part of the USBC each time it is updated, unless there is a state amendment that amends an I-Code section. He explained that all of the changes or amendments to the model codes are published and posted on the DHCD website.

Mr. Homewood suggested that the group analyze all existing amendments to the energy code and any proposed code changes.

Ms. Owen stated that it is important to look at these things because the general public does not keep up with the process and does not have the time to review these details. If we as a state are serious about increasing resiliency, and we rely on the general public, we are doing a huge disservice to the entire state. We should look at these proposals or set up some guidelines to help the Board review these items to ensure that resiliency is being adequately addressed.

Mr. Brown agreed that it would be good for the members to review these items, but there are potentially hundreds of items to review, so that additional work should take place outside of the meetings and if specific issues related to resiliency are discovered, they could be brought back to the group to be addressed. There is a separate energy subworkgroup meeting that reviews each energy related proposal and makes a recommendation on each. There are also many others interested stakeholders that are actively involved in the process, participate in the discussions and help make recommendations for each proposal. He also reminded everyone that there is a public comment feature in cdpVA where anyone can submit comments on any proposal.

Mr. Homewood stated that he disagreed with some of the resiliency impact statements, as outlined in his document. He also really liked some of the proposals like one that provided a standard to utilize for rainwater harvesting and reuse and thinks the group should be pushing these kinds of thing going forward.

### **Discussion of potential changes**

Mr. Homewood suggested the following as potential code changes:

- Require for all 1& 2 family new construction and substantial improvement, installation of an external connection for a generator and a transfer switch. The ability for people to remain in place is a key resiliency element.
- Mandate standby generators for certain uses (nursing homes, etc.).

- Require any construction (remodeling, etc.) to certain uses to meet the most current codes (no grandfathering).

Mr. Brown explained the process for the group discussing and developing proposals as well as how any proposals would be further vetted by the full workgroups and the Board. The proposed regulations phase is soon coming to a close. This group can continue working on developing some proposals and submit them during the final regulations phase.

Ms. Owen pointed out that she has noticed, at the local level, a deficiency or lack of understanding or familiarity with the existing flooding standards in the building code. Even if we don't propose changes, we still need to address the education piece. The existing codes contain good resiliency requirements, if they are properly enforced.

Ms. Owen also pointed out that there is a disconnect between the local floodplain requirements and the building code requirements. One example is related to substantial improvements, that should be tracked and documented, but are not always regulated by the building code (painting, floor coverings, etc.). There needs to be more education so that the locals understand how the two regulations work together to ensure they are not missing important requirements.

Mr. Brown suggested that if the group identifies an issue, like education, that would really make an impact on resiliency, but is not related to the work of this group, we might consider making a recommendation or list of recommendations to other groups to address those issues.

Some other programs were discussed such as Hurricane High Velocity Wind Zone requirements in Florida and FORTIFIED building standards. It was pointed out that the Florida codes focus on weak point such as roofs, garage doors and soffits

Mr. Homewood suggested that maybe, for this round, we look at proposing to allow the localities to consider adopting the FORTIFIED requirements for certain zones and then look at the Florida requirements next round. We can let the coastal communities adopt what they want so it's not the Commonwealth imposing the code but it's up to the localities and the local official take the responsibility on what is decided.

It was pointed out that Florida uses a projective wind zone and Virginia uses a historic wind zone.

It was suggested to reevaluate the wind zones in Virginia more frequently. Maybe there are outside resources, like college students/groups, that would be willing to help gather data.

Ms. Owens suggested that substantial damages and improvements could be applied outside of the flood zone, requiring retrofitting of existing structures to current code when certain thresholds of property improvements are reached. It would make it much more clear for everyone to remove any conflicts or differing requirements between the USBC and the NFIP.

The following documents from the shared Dropbox folder were briefly reviewed and discussed:

- 2015 USBC and I-Code Provisions Applicable to Construction in Flood Hazard Areas
- NFIP 2015 I-Codes and ASCE 24 Checklist (list of all NFIP requirements and where they are satisfied in the IBC and/or ASCE 24)
- Payne 2018 IBC Resiliency References (Included a draft proposal to amend IBC appendix G for use in Virginia and a draft appendix for high-wind based on the IBC Tsunami appendix).

Mr. Brown suggested that the group pick one of the suggested code changes to discuss to see if there was consensus to further develop it and move it forward. Homewood suggested to put forward a proposal for a requirement for some kind of emergency generator hookup on new construction and significant rehabilitation.

Ms. Owen suggested consideration of a proposal to require all structures to comply with the substantial damage and substantial improvement requirements that are currently only applicable to structures in a flood hazard area. It does not make sense to apply the requirements to one house and not to one that is several feet away, just outside of the flood hazard area.

Mr. Redifer stated that, if you require a generator connection for a generator, you will have to specify the details and requirements such as electrical requirements, minimum circuits served, minimum capacity, manual or automatic transfer switch, etc.

The group identified the inability to remain in a home after an event, when power is lost, as an important resiliency issue and having a safe connection for connection of a portable generator would make it possible, in many instances, to remain in place for an extended period of time.

It was agreed to draft a code change proposal that would require installation of a minimum 30 amp connection for a generator for all newly constructed Group R-2, R-3, R-4 and R-5 dwelling units and for existing dwelling units anytime the electrical service is being upgraded. DHCD staff will develop the draft proposal, based on the discussions and bring a draft back to the group at the next meeting for review.

A suggestion was made to identify or make available wind zone and other maps for Virginia that are easier to read. The small maps in the I-code books are so small it is hard to see what zone a locality is in.

Mr. Homewood brought up an issue with corrosion resistant fasteners. It is addressed in flood hazard areas and some other areas, but not in all areas near salt water. Corrosion of fasteners occurs anywhere saltwater or brackish water is present. The group discussed identifying areas where this is a concern and developing a map where corrosion resistant fasteners are required. Ms. Katchmark discussed a VDOT study that is being conducted to identify and map areas where corrosion is an issue for VDOT structures. She suggested reviewing their findings to see

if that information could be used as a starting point for determining where the group could propose to require corrosion resistant fasteners in the USBC. A suggestion was also made that a list of localities where specific requirements apply could be added in lieu of a map. The proposal should include information to support the idea that although the current code requires corrosion resistant fasteners in certain locations, but there are other areas where corrosion is also an issue that need to be addressed. The group will work on researching this prior to the next meeting.

Other suggestions related to requiring additional hold-down and strapping devices in hurricane prone regions and inclusion of standards such as FORTIFIED as an option for localities to adopt in certain high hazard areas were discussed and determined to need additional research on what the code already requires.

Ms. Owens stated that she has some questions related to flood-proofing of accessory structures, installation of recreational vehicles in flood hazard areas, the USBC definition of substantial damage and elevation documentation requirements that she would like to discuss to determine if these sections would benefit from clean up. She also has general questions about application of some of the language in the building code. She will do research and discuss with Mr. Brown prior to the next meeting and if any issues are identified, will bring back them back for discussion at the next meeting.

The group will meet again prior to the final regulations phase workgroups meet.

**2nd Resiliency Subworkgroup Meeting**  
**VHC at VHDA**  
**4224 Cox Road, Glen Allen VA**  
**July 17, 2019**  
**SIGN IN SHEET**

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