Background
On April 2, 2014 the City of Baltimore adopted two bills, City Council Bill #14-208 and #14-209, that keep the City in compliance with the National Flood Insurance Program (NFIP) and set the stage for the City’s application to the NFIP’s Community Rating System (CRS), a flood insurance discount program that reduces the cost of flood insurance for structures at a higher risk to flooding. One bill repealed and replaced Article 7 – Natural Resource, Division I – Floodplain Management. The other bill aligned and conformed floodplain management requirements to other floodplain regulations found in various parts of the building code and the zoning code.

The intention of the Floodplain Map and Code update was for the City to:
1. Adopt the new FEMA floodmaps.
2. Approve establishment of a new flood zone in the tidal and non-tidal floodplains that allows the City to regulate floodplain development to the extent of the 0.2% flood (500-year) citywide and regulate to the height of the 0.2% flood in the tidal floodplain.
3. Adopt a two-foot freeboard citywide in an effort to align with Governor Martin O’Malley’s Executive Order 01.01.2012.29, Climate Change and “Coast Smart” Construction, enacted in December, 2012.
4. Incorporate ASCE 24-05/Flood Resistant Design and Construction.

This memo is intended to clearly explain the intent of the City’s code and how the City’s Certified Floodplain Managers will regulate the code. Specific provisions warranting further clarification are:
- The extent and height to which the City will regulate within the tidal and non-tidal floodplain areas; and
- The City’s freeboard height requirements

The Tidal and Non-Tidal Floodplain Changes
The Flood Resilience Area1 was developed with the intent to regulate to both the extent (the area covered) and height (the elevation to which floodwater is anticipated to rise) of the 0.2% flood event in the tidal floodplain. The definition of the Floodway Fringe2 was updated to achieve the intent to regulate to the extent of the 0.2% flood event in the non-tidal floodplain, but to maintain the 1% flood height requirements.

In the tidal floodplain, the flood height levels from the latest FEMA maps for the 1% and the 0.2% flood events are quite consistent. In the non-tidal floodplain, however, the latest FEMA maps show a sometimes substantial variation between the height levels for the two different flood events. Therefore, the City has chosen to regulate to the height of the 1% flood event in both the 1% flood and 0.2% non-tidal floodplain areas.

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1 Flood Resilience Area comprises those lands within a tidal floodplain that due to hurricanes, tropical storms, and the rising Bay are subject to a 0.2% chance of flooding in any given year [Art 7, 2-2 (g)]
2 Floodway Fringe comprises those lands within the Floodplain District that are subject to inundation by a base flood or 0.2% chance flood [Art 7, 2-2 (c)]
**Diagram 1: Height**
The City of Baltimore regulates to the Design Flood Elevation (DFE) which is the Base Flood Elevation (BFE) plus 2 feet of Freeboard. The BFE is for the 0.2% chance flood in the tidal floodplain and the 1% chance flood in the non-tidal floodplain.

**Diagram 2: Extent**
The City of Baltimore regulates to the 0.2% chance flood in both the tidal and non-tidal floodplain.

It is important to note that the extent of the 1% floodplain from the 2012 maps nearly mirrors the extent of the 0.2% floodplain for the 2014 maps. Thus, the change to the **extent** the City regulates has barely changed.

The intent of adopting a two-foot freeboard citywide was to support the recommendations of the City’s Disaster Preparedness Project and Plan (DP3) and align with Governor Martin O’Malley’s Executive Order enacted in December, 2012. Prior to adoption, the City had a freeboard of one foot. Freeboard is a vertical factor of safety above the minimum requirement. For example, if a map states that the Base Flood Elevation (BFE) is five feet, the additional freeboard of two feet means that floodplain resistant design and construction would have to protect to seven feet. This provision keeps design requirements consistent to today’s City standards for those properties along the water’s edge.

All of the changes to the City’s code are intended to make Baltimore a more resilient city. In 2012, FEMA completed a new study of the tidal floodplain of the Chesapeake Bay. This study established new tidal floodplain boundaries for the City, and the rest of the Chesapeake Bay communities and reflect significant changes. It is important to note, these maps do not take into account future impacts from climate change. A study of the City’s non-tidal areas is expected within the next 18 months.

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3 Base Flood Elevation means the water surface elevation of the base flood in relation to the datum specified on the Flood Insurance Rate Map [Art. 7, 1-2 (e)]
On October 3, 2013 the City of Baltimore Planning Commission adopted the Disaster Preparedness Project and Plan (DP3). This Plan is the City’s effort to address existing natural hazards while simultaneously preparing for the impacts of climate change. The DP3 extensive mapping and risk assessment provided the City with an opportunity to assess existing and predicted impacts and determine effective mitigation and adaptation recommendations for Baltimore. The floodplain changes directly support the recommendations made in the DP3.

**Insurance**

Financial institutions are responsible for identifying and requiring flood insurance for any loans they process. Financial institutions utilize adopted floodplain maps to make their determinations. Although anyone in the City can purchase flood insurance through the NFIP, those structures located within the higher risk zone (1% chance) are required to purchase flood insurance. Flood insurance premiums, for those structures within the higher risk zone, are expensive.

In 2012, congress passed the Biggert-Waters Act. The most recent legislation, the Homeowner Flood Insurance Affordability Act, adopted in 2014, is intended to delay the drastic increases in flood insurance premiums required by the Biggert-Waters Act, but not prevent them. Over time, flood insurance rates will rise annually, and increase already expensive flood insurance premiums. As recommended in the DP3, the Department of Planning is pursuing a program that will discount flood insurance anywhere from 5% to 45%. The Community Rating System (CRS) is a program that awards communities, through discounted flood insurance rates, for going above and beyond the federal minimum requirements and mitigating against flood damage. The floodplain changes listed above directly support the City’s efforts to become a CRS community.

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