ENVIRONMENTAL PROTECTION

LAND USE MANAGEMENT

FLOOD HAZARD AREA CONTROL ACT RULES

Adopted Amendments: N.J.A.C. 7:13-1.2, 3.2 through 3.6, 7.1, 7.2, 8.7, 8.8, 9.2, 10.4, 11.5, 11.6, and N.J.A.C. 7:13 Appendix 2

Proposed:	February 19, 2013 at 45 N.J.R. 360(a)
Adopted:	March 25, 2013 by Bob Martin, Commissioner, Department of Environmental Protection
Filed:	as R.2013 d. , without change
Authority:	N.J.S.A. 58:16A-50 et seq.; 58:10A-1 et seq.; 58:11A-1 et seq.; 13:20-1 et seq.; 13:1D-1 et seq.; and 13:1D-29 et seq.
DEP Docket Number:	01-13-01
Effective Date:	March 25, 2013
Expiration Date:	November 7, 2014

The Department of Environmental Protection (Department) is readopting amendments to the Flood Hazard Area Control Act rules at N.J.A.C. 7:13 that were concurrently proposed as part of an emergency adoption on January 24, 2013. The emergency adoption and concurrent proposal was published on February 19, 2013. The comment period closed on March 21, 2013.

Summary of Hearing Officer's Recommendation and Agency Response

The Department held a public hearing on the proposal on March 7, 2013, at 5:30 P.M., at the City of Long Branch Municipal Building. Chief Advisor to the Commissioner Ray Cantor was the hearing officer. Fifty-one people attended and twenty-four gave testimony. The hearing

officer recommended that the amendments be adopted as proposed without change. The Department accepts the recommendation.

The hearing record is available for inspection in accordance with applicable law by contacting:

Office of Legal Affairs
Attention: DEP Docket No. 01-13-01
Department of Environmental Protection
401 East State Street, 4th Floor
Mail Code 401-04L
P.O. Box 402
Trenton, New Jersey 08625-0402

Summary of Public Comments and Agency Responses

The Department accepted comments on the proposal through March 21, 2013. The following individuals provided written and/or oral comments:

1. Abrahamsen, Ryan
2. Acropolis, Stephen; Mayor, Township of Brick
3. Alberque, Edward
4. Alloco, Gerard
5. Alosco, Michael
6. Anderson, Donna
7. Apsey, Denise and William
8. Arcadi, Tony
9. Avery, Jim
10. B., J.
11. Baran, Anna

12. Battaglia, Peter
13. Bayer, Bruce
14. Beecher, Patryce
15. Behmke, Doreen
16. Bolanowski, Lawrence
17. Bolcar, John
18. Bolcar, Tom
19. Bowles, Art
20. Boyle, Marsilia A.; Newport Associates Development Co.
21. Brennan, Diane
22. Bunting, Al
23. Bye, David
24. Cameron, Rebecca
25. Cameron, William
26. Cardoso, Jill
27. Carey, Tim
28. Carluccio, Tracy; Delaware Riverkeeper Network
29. Carpenter, Robert
30. Castronovo, Nancy
31. Castronovo, Nancy and Robert
32. Casullo, Sharon
33. Chamberlin, Christopher

34. Chankalian, Robert; Toms River Township

35. Chapman, Elizabeth

36. Charette, David; Langan Engineering and Environmental Services

37. Christoph, Ernest

38. Ciunga, Maria

39. Cocozza, Louis

40. Commins, Alyssa

41. Connelly, Joyce

42. Conway, Grace

43. Corbett, John

44. D'Amico, Mary

45. Defeo, Robert

46. Diana, Martha

47. Diguglielmo, Ken

48. Dilodovico, Tony; Tony D. Environmental Permitting

49. Dix, Junetta; Junetta N. Dix Consulting

50. Dolinaj, John and Rosalie

51. Donegan, James

52. Dorfman, Jack

53. Draing, Tina

54. Dres-Hajeski, Caren

55. Dressler, Paul

56. Ehrline, Kathryn and Leo

57. Ely, Kim

58. Ermides, Paul

59. Ertle, Thomas

60. Ferrante, Bobby

61. Flaherty, Stephen

62. Fleming, William

63. Flor, Jaclyn J.; T&M Associates on behalf of Sea Bright Borough

64. Frizzell, Verity L.

65. Fulcomer, James

66. Fulcomer, Katherine

67. Galuchie, John and Marianne

68. Garruto, Mark

69. Gattuso, Paul

70. Gillian, Jay A.; Mayor, City of Ocean City

71. Giordano, James

72. Giordano, Joseph

73. Gober, Richard

74. Golemme, Donald

75. Greenberg, Marilynn R.; Riker, Danzig, Scherer, Hyland and Perretti, LLP on behalf of Newport Associates Development Company

76. Haase, Kenneth

77. Hallam, Laura

78. Haynes, Kathy

79. Healy, Jerramiah T.; Mayor, City of Jersey City

80. Hendricks, Ruth

81. Herczeg, Susan

82. Heveran, Marian

83. Howard, Susan; Mayor, Borough of Monmouth Beach

84. Huth, Nicholas

85. Ingargiola, John; FEMA

86. Intile, Joseph

87. Jeffrey, Paul

88. Johnson, Elaine

89. Johnson, Patricia

90. Kalfas, Kristine; Hartz Mountain Industries

91. Kanterezhi, Jeannie

92. Kashar, Karen

93. Kasimos, George

94. Katz, Eric

95. Kearns, Kevin

96. Kelly, Ellen

97. Kelly, Frank

98. Kelly, Michael; Boswell McClave Engineering on behalf of Village of Ridgefield Park

99. Kerr, Frederick

100. Kilpatrick, Daniel

101. Kirk, Kathleen

102. Kizis, Lynne

103. Koscinski, Nancy and Robert

104. Kramer, Jeffrey

105. Labarre, Grace

106. Larue, Robert

107. Lesko, Laura

108. Lipton, David

109. Logan, Arleen and William

110. Lozito, Linda

111. Lurker, Karen

112. Mackinnon, Charles

113. Madara, Caroline

114. Magalhaes, Patricia

115. Maharg, Herbie

116. Marcellino, Carmela

117. Marks, David M.; T&M Associates on behalf of Borough of Rumson

118. McAlindin, Brian

119. McAndrew, Jim

120. McCarthy, Owen

121. McCue, Kelli

122. McGrattan, Gail

123. Meyer, Martha

124. Michenfelder, Frank

125. Miller, James

126. Miller, John; New Jersey Association of Floodplain Management

127. Miller, Lisa

128. Mizer, Frank

129. Molloy, Margaret

130. Munson, Dave

131. Neuhaus, Bernard

132. Newby, Francis

133. Nylander, Douglas

134. O'Connor, Edwin

135. Oldham, Jonathan; Mayor, Borough of Harvey Cedars

136. Palmisano, James

137. Pierguidi, Ernest

138. Poillon, Peter

139. Probert, Lisa

140. Quinn, Margaret

141. Quinn, Rebecca; RCQuinn Consulting on behalf of FEMA

142. Raichle, Andrew; Birdsall Services Group

142A. Raiders, Rich; Buckeye Albany Terminal

143. Raisch, Tom

144. Ramos, Ruben, Jr.; Assemblyman Legislative District 33

145. Rella, Joseph

146. Ridings, Christopher

147. Riley, Dennis

148. Robertson, Debra

149. Romano, Lori

150. Ronayne, Donna

151. Rosellini, John

152. Ruffo, Peter

153. Rutkowski, Ellen

154. Ryan, Art and Mary

155. Schalhoub, Robert

156. Scott, Susan

157. Secor, Scott

158. Sekora, Doris

159. Seyra, Kathy

160. Shohfi, Steve

161. Sinneck, Mike

162. Smith, Serena

163. St. Vincent, Roseteresa

164. Stockton, Andrew; Eastern Civil Engineering, LLC

165. Strenck, Charles

166. Stypulkoski, Denis

167. Taglione, Mark

168. Tarantino, Mike and Jane

169. Taylor, Trevor; CME Associates on behalf of Stafford Township

170. Terkelsen, Gene

171. Tice, Kirk

172. Tighe, John

173. Tittel, Jeff; New Jersey Sierra Club

174. Tomson, Douglas; New Jersey Association of Realtors

175. Touhey, Timothy; New Jersey Builders Association

176. Treadwell, Larry

177. Van Rossum, Maya; Delaware Riverkeeper Network

178. Venedam, Debbie

179. Verran, Craig

180. Wacker, Steven

181. Wolfe, Bill; Public Employees for Environmental Responsibility

182. Yager, Thomas

183. Zierten, Dan

184. Zuest, Robert

185. Zuhowski, Barbara

The timely submitted comments and the Department's responses are summarized below. The number(s) in parentheses after each comment identifies the respective commenter(s) listed above.

General

1. COMMENT: Several commenters expressed support for the Department's rulemaking and its use of the Advisory Base Flood Elevations (ABFEs) at the best available data to determine flood elevations. Commenters cited concerns over the economic and social impacts of continued flood damage in the State's coastal areas, specifically as it affects non-coastal residents. Once commenter expressed support for the effort to create consistency in flood elevations across municipalities, believing that it would provide benefits in terms of increased resiliency and avoidance of negative ratings in the purchase of flood insurance. Others felt that the Department should prohibit construction in the State's coastal areas altogether. (28, 35, 36, 114, 126, 157, 177)

   RESPONSE: The Department acknowledges these comments in support of the amendments. The Department has determined that a prohibition on construction is not warranted and that the elevation standards contained in this rulemaking are the appropriate measure to protect public health, safety and welfare. Further, the Flood Hazard Area Control Act at N.J.S.A. 58:16A-55.1 provides that "No rule or regulation . . . shall prevent the repair or rebuilding within a flood hazard area of any lawful preexisting structure which was damaged by a flood

or by any other means." As such, the Department does not have the statutory authority to prevent the reconstruction of a lawfully existing private residence, or any other structure, in a flood hazard area.

2. COMMENT: Many commenters questioned the Department's decision to allow for the use of the Federal Emergency Management Agency's (FEMA) Advisory Base Flood Elevations (ABFEs) as part of the proposal. Some commenters believe ABFEs should not be used in the Department's rules at all because the ABFEs are not accurate. Others believe they should not be used until FEMA finalizes the flood mapping. The ABFEs do not reflect actual flood data from Superstorm Sandy, which would help to properly calibrate flood elevations, but did reflect storms such as Hurricane Katrina. The ABFEs also do not reflect measures taken since Superstorm Sandy to protect properties, or the attenuating effects of proposed flood mitigation projects. The ABFEs do not include flood data collected from Superstorm Sandy, which would help to properly calibrate flood elevations. The maps do not treat properties individually. The ABFEs create impossible or anomalous situations such as the boundary between A and V zones splitting a single house, or adjacent houses shown at different base flood elevations such that they would be required to be raised to different heights. It is not clear if the Department conducted its own analysis of the ABFEs in order to confirm their accuracy or if the Department will accept calculated flood elevations that differ from the ABFEs. There is no mechanism to comment on FEMA mapping to make corrections. The economic impacts of implementing the ABFEs need to be considered before the flood mapping is finalized. Requiring homeowners to elevate to the ABFE puts homeowners in an

impossible situation financially because the insurance company will not provide Increased Cost of Compliance funds to raise a home to the elevation required by the ABFE until the maps are final. The final FEMA maps could change, putting those following the ABFEs at risk of being out of compliance with the final maps. The ABFEs should be used only as practical guidance for those who have to rebuild. (1, 2, 3, 4, 7, 8, 12, 17, 18, 20, 22, 23, 26, 27, 30, 32, 34, 35, 36, 38, 39, 40, 43, 53, 57, 58, 59, 61, 63, 66, 65, 69, 70, 71, 72, 73, 74, 79, 80, 81, 82, 83, 84, 86, 87, 90, 92, 93, 98, 99, 100, 108, 115, 117, 119, 120, 121, 125, 128, 129, 133, 135, 138, 142, 144, 154, 155, 161, 164, 166, 169, 174, 175, 180, 184, 185)

3. COMMENT: Commenters believe that their homes should not be in a flood zone as designated by the ABFEs. Some indicate that they have never had flooding/water issues. Others indicate that the only time they had any flooding was during Superstorm Sandy and then not to levels indicated by the ABFEs. One commenter indicated they do not agree with the elevations applicable in the A zone. (33, 89, 91, 105, 111, 123, 174)

4. COMMENT: Some commenters believe that Superstorm Sandy was a once in a lifetime event that well exceeded a 100-year flood and should therefore not be the basis for developing regulatory flood mapping. One commenter claimed his property sustained minimal damage from Superstorm Sandy, even though his property is much lower than the ABFEs (3, 7, 10, 34, 71, 90, 115, 125)

5. COMMENT: One commenter supports the zone designations. FEMA should not make any changes to the proposed maps. (76)

RESPONSE TO COMMENTS 2 THROUGH 5: As explained below, given the age and inaccuracy of the previous flood mapping, the use of which was required under the prior rules, the Department has found that the ABFEs represent the best available flood data. As such, the Department determined that it is the most protective of public health, safety and welfare to allow for the use of the current ABFEs for the construction of new or elevated buildings, and for substantially damaged buildings that are being repaired, unless and until better flood data is made available. The purpose of this rulemaking is to ensure that the best available flood mapping is used by New Jersey residents and it contains provisions that provide for the use of FEMA's updated flood mapping as it becomes available.

Prior to this rulemaking, the flood elevations throughout New Jersey's eastern waterfront consisted of a patchwork of flood elevations determined by Department delineations and, where a Department delineation was unavailable, FEMA's effective Flood Insurance Rate Maps. In the majority of coastal communities, FEMA set the 100-year flood elevation, i.e., the peak elevation of a flood that has a one percent chance of occurring in a given year. In many instances these delineations were developed decades ago using various methodologies. Prior to Superstorm Sandy, and in response to concerns that FEMA's existing flood insurance studies underestimate the extent of tidal flooding in many communities, the Department had already begun to work with FEMA to develop more accurate coastal flood mapping.

When Superstorm Sandy impacted the State, FEMA and its consultants were still in the process of developing this new flood mapping. In order to support and guide the State's recovery efforts and help communities to be more resilient to future storms, FEMA made its most current mapping for the New Jersey coastline and Hudson River area, the ABFEs, publicly available in December 2012. The ABFEs confirmed that the flood mapping used by the State prior to this rulemaking was outdated. Using a uniform modeling approach and the most accurate and recent data, FEMA confirmed that its existing flood mapping along New Jersey's coastline generally underestimates today's actual 100-year flood elevation by approximately one to four feet and, in some circumstances, by as much as eight feet. This was illustrated during Superstorm Sandy, when many people who had constructed a building with its lowest floor at the 100-year flood elevation shown on FEMA's effective Flood Insurance Rate Maps discovered that the portions of their building that lay below the advisory base flood elevation were subjected to severe flood damage.

While the ABFEs are not final, given the age and inaccuracy of previous coastal flood mapping and the detailed analysis conducted by FEMA, the Department found that the ABFEs represent the best available and most accurate flood data. As such, the Department determined that it is the most protective of public health, safety and welfare to allow for the use of the ABFEs for the construction of new or elevated buildings, and for substantially damaged buildings that are being repaired, unless better flood data is made available. Had the Department not taken these steps to allow for the use of the ABFEs, and to incorporate future FEMA mapping, residents would have been able to reconstruct their substantially damaged structures using the prior and inaccurate flood elevations, creating a potentially significant

detriment to public health, safety and welfare during the next flooding event.

The data used by FEMA to undertake new flood modeling was collected along the eastern seaboard over a period of decades and incorporates data from the State's climatological region, rather than that from storms such as Hurricane Katrina. The data utilized by FEMA did not include, and was not intended to include, data from Superstorm Sandy, attenuation measures taken after Superstorm Sandy or site-specific circumstances beyond the scope of FEMA's modeling. Nevertheless, the Department still believes that the ABFEs represent the best available data. Notwithstanding, and in consideration of the fact that the ABFEs are, by definition, not final, the rules include a provision that allows individuals who wish to proceed before FEMA releases its effective Flood Insurance Rate Maps or disagree with the required flood elevation or zone designation associated with their property, to secure the services of an engineering consultant to compute the design flood elevation at a specific site under an application for a flood hazard area verification pursuant to N.J.A.C. 7:13-6. If the Department agrees with the submitted analysis, the Department will verify the use of the computed flood elevation at that site for any Land Use permit. The approved flood elevation can subsequently be used to establish the elevation of the lowest floor of a building and, if a wave height of less than three feet is computed, the site will be considered to lie in Zone A for the purposes of conformance with State permits and compliance with the Uniform Construction Code. However, note that calculated flood elevation approved by the Department will not affect flood insurance rates. Flood insurance rates are established by FEMA and are based on FEMA flood elevations and zones, not State flood mapping or other approvals. For these reasons, most people choose to rely on State or

FEMA flood mapping to determine flood elevations and zone designations, since the cost of performing flood calculations is not generally offset by lower construction costs. Furthermore, constructing structures at elevations lower than those designated by FEMA could result in significant increases in flood insurance premiums if FEMA ultimately does not agree with the site-specific flood calculations approved by the Department. However, the option to calculate flood elevations is available to all prospective applicants.

In the Department's view, the tidal stillwater elevations set forth in the ABFEs are unlikely to change. However, tidal flood elevations may be subject to further revision by FEMA. Tidal flood elevations are computed by adding the stillwater elevation to the anticipated wave height at a given location. Prior to Superstorm Sandy, FEMA had completed its tidal stillwater calculations along New Jersey's eastern waterfront. However, FEMA had not yet completed its wave height analysis, in which detailed, ground-verified geometry of buildings and other structures at numerous transects along the coast is entered into a complex model that computes the ability of these buildings and structures to attenuate wave action. Accordingly, FEMA has approximated coastal wave heights as a function of stillwater depths, in accordance with the findings and recommendation of the National Academy of Sciences. Specifically, the National Academy of Sciences, based on oceanographic computations, recommends that the height of waves above stillwater elevation, in absence of attenuating structures, be assumed to be 55 percent of the depth of stillwater flooding at a given location. FEMA furthermore determined its advisory A and V-Zone designations based on this recommendation. Any area that was found to have a wave height of at least three feet using this method was depicted in the advisory V-Zone. Areas

with a wave height of less than three feet were depicted in the advisory A-Zone. Even with approximated wave heights, the Department believes that FEMA's ABFEs represents the best available flood data for New Jersey's eastern waterfront.

FEMA expects to release the results of its wave height analysis over the next several months, and believes that the analysis will in some locations change the depth of flooding as well as the zone designation. After FEMA completes its wave height analysis, the maps will be again released for public use and scrutiny. Individuals who do not agree with an advisory base flood elevation or zone designation are encouraged to closely review FEMA's upcoming map revisions. These maps will subsequently be proposed in the Federal Register as FEMA initiates its formal map adoption process. At that time, interested parties may present data in support of revising the proposed (preliminary) mapping. Communities and private individuals will, therefore, have an opportunity to raise concerns directly to FEMA regarding the base flood elevations and zone designations during the Federal review process.

In response to the suggestion that the economic impacts of implementing the ABFEs need to be considered before the flood mapping is finalized, the Department recognizes the economic impact that many people have sustained as a result of Superstorm Sandy and does not intend to burden affected communities with unnecessary regulatory requirements. FEMA does not consider the potential economic impact of altering flood elevation or zone designations; its mandate is to create mapping that most accurately depicts the areas of land that will be inundated during floods.

Requiring new, reconstructed and substantially damaged buildings to meet current construction standards is a longstanding requirement of the National Flood Insurance

Program and New Jersey's Uniform Construction Code at N.J.A.C. 5:23, which is promulgated by the New Jersey Department of Community Affairs and administered locally. This rulemaking requires buildings already being elevated to be elevated to higher, safer elevations. As noted in the response to comments 7 and 8, the incremental cost of elevating a building higher than would otherwise be required under municipal ordinance is generally less than increased, long term flood insurance premiums. Therefore, the Department believes that requiring new, reconstructed and substantially damaged buildings to be elevated using the best available flood mapping will, in the long term, minimize flood damage potential and its attendant adverse economic and social impacts, and lower future flood insurance rates.

6. COMMENT: Commenters believe that their homes or community should not be in the V zone as designated by the FEMA maps. Many state they have lived in their homes for extended periods of time and have never seen three foot waves near their homes during flood events. Some suggest that only homes on the bayfront or barrier islands should be designated in the V zone and that the V-Zone should not extend significantly landward. (2, 6, 9, 10, 11, 12, 14, 15, 16, 17, 19, 20, 23, 26, 29, 33, 34, 35, 37, 39, 40, 41, 44, 45, 50, 54, 56, 59, 61, 62, 63, 64, 65, 67, 69, 70, 71, 72, 75, 77, 80, 81, 82, 83, 86, 87, 90, 94, 99, 100, 102, 106, 107, 108, 109, 110, 118, 124, 125, 131, 133, 136, 137, 140, 0, 145, 146, 147, 150, 151, 152, 153, 158, 160, 162, 164, 165, 169, 171, 178, 182, 185)

RESPONSE: As noted in the response to comments 2 through 5, FEMA tidal flood elevations are computed by adding the depth of the tidal surge, also known as the stillwater

elevation, to the anticipated height of waves above the stillwater elevation. This modeling does not, and is not intended to, account for site-specific observations. Prior to Superstorm Sandy, FEMA had not yet completed its wave height analysis, in which detailed, ground-verified geometry of buildings and other structures at numerous transects along the coast will be entered into a complex model that computes the ability of these buildings and structures to attenuate wave action and modify the extent of the V-Zone. . In absence of a more detailed analysis, FEMA has approximated coastal wave heights as a function of stillwater depths, in accordance with the findings and recommendation of the National Academy of Sciences. FEMA furthermore determined its advisory A and V-Zone designations based on this recommendation. Any area that was found to have a wave height of at least three feet using this method, whether inland or near the bay, water or on a barrier island, was depicted in the advisory V-Zone. Areas with a wave height of less than three feet were depicted in the advisory A-Zone.

For example, if the stillwater elevation at a given location is computed to be 10 feet and the ground elevation at that location is four feet, that location is expected to experience six feet of stillwater flooding. The anticipated wave height is then determined by multiplying the flood depth (six feet) by 55 percent, as recommended by the National Academy of Sciences, in this case resulting in an estimated wave height above stillwater of 3.3 feet. The anticipated flood elevation at this location is therefore equal to 13.3 feet (the stillwater elevation of 10 feet plus anticipated additional wave height of 3.3 feet). Since the anticipated wave height is greater than three feet, this location would be assumed to lie within Zone V.

Even with approximated wave heights, the Department believes that FEMA's ABFEs

represents the best available flood data for New Jersey's eastern waterfront. Since releasing the advisory maps, FEMA has continued to complete its wave height analysis, using the detailed method described above. FEMA expects to release the results of its wave height analysis over the next several months, and believes that the analysis will in some locations change the depth of flooding as well as the zone designation. After FEMA completes its wave height analysis, the maps will be again released for public use and scrutiny. Individuals who do not agree with an advisory base flood elevation or zone designation are encouraged to closely review FEMA's upcoming map revisions.

Individuals who wish to proceed before FEMA has completed its wave height analysis can secure the services of an engineering consultant to compute the design flood elevation at a specific site to submit in support of an application for a flood hazard area verification pursuant to N.J.A.C. 7:13-6. If the Department agrees with the submitted analysis, the Department will verify the use of the computed flood elevation at that site for any Land Use permit. The approved flood elevation can subsequently be used to establish the elevation of the lowest floor of a building and, if a wave height of less than three feet is computed, the site will be considered to lie in Zone A for the purposes of conformance with State permits and compliance with the Uniform Construction Code. However, note that the calculated flood elevation approved by the Department will not affect flood insurance rates. Flood insurance rates are established by FEMA and are based on FEMA flood elevations and zones, not State flood mapping or other approvals. Constructing a building using Zone A standards as set forth in the Uniform Construction Code in an area depicted on FEMA's effective Flood Insurance Rate Map as Zone V can result in extremely high flood insurance

premiums.

7. COMMENT: Commenters are concerned it will be impossible or cost-prohibitive to comply with the elevation requirements. Some commenters are concerned that those who do not elevate their homes will not be able to afford the high flood insurance rates. Some commenters noted that restrictions on V-Zone construction will create an undue financial hardship for many property owners, particularly in urban waterfront areas. Commenters state that if homeowners cannot afford to elevate or buy flood insurance, those homeowners, particularly those on fixed incomes, may feel they have no choice but to leave. Elevation may not be possible because there is no room on a particular lot to move a house while the pilings are being driven. Elevation may not be possible for a large residential building such as a condominium complex, or for older brownstone and converted industrial buildings in the urban setting. One commenter stated that the municipal building department will not issue a building permit to renovate a home in a V zone unless the home is also elevated, so, even though the commenter does not want to elevate or buy flood insurance, the commenter will have to incur the extra cost to elevate the home anyway. (2, 3, 5, 10, 15, 18, 20, 26, 27, 32, 34, 35, 39, 43, 44, 51, 53, 56, 59, 60, 61, 62, 63, 64, 66, 70, 72, 75, 78, 79, 83, 87, 88, 89, 91, 92, 93, 97, 102, 103, 105, 106, 107, 108, 110, 111, 112, 113, 117, 118, 120, 122, 123, 124, 125, 127, 128, 129, 130, 131, 132, 134, 135, 136, 140, 144, 145, 146, 147, 148, 149, 152, 153, 154, 156, 159, 162, 163, 165, 166, 167, 168, 169, 170, 171, 172, 174, 175, 178, 179, 185, 183)

8. COMMENT: Commenters believe existing structures should be grandfathered from the requirements to elevate, especially those recently constructed. Some commenters are concerned that requiring people to elevate existing houses will make providing emergency exits and barrier-free access difficult or impossible. (3, 13, 21, 24, 25, 32, 42, 46, 66, 72, 75, 83, 94, 96, 99, 102, 104, 117, 139, 176, 179)

RESPONSE TO COMMENTS 7 AND 8: The Flood Hazard Area Control Act rules require an existing building to be elevated only if it has been substantially damaged or if substantial improvements are proposed. The Department does not require any other building to be elevated. If a building has not been substantially damaged or subject to a substantial improvement, then there is no requirement in the Flood Hazard Area Control Act rules to elevate that building.

"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its condition before damage would equal or exceed 50 percent of the market value of the structure before the damage occurred. Restoration of a substantially damaged structure constitutes a substantial improvement as defined in the rules. "Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure as determined before the start of construction of the improvement. This term includes structures that have sustained substantial damage regardless of the actual repair work performed. These terms indicate that a substantial economic investment is being undertaken, either to restore a building to a habitable condition or to enlarge or otherwise

improve the value of a building. If the lowest floor of a building lies below the flood elevations set forth in this rulemaking, the Department has determined that the building is at risk for flood damage, and the existing and future occupants are subject to severe adverse economic and social impacts of flooding. As such, in cases where a municipal floodplain administrator determines that a building has sustained substantial damage or has undergone a substantial improvement, the Department has determined that it is in the best interest of the public health, safety and welfare to bring the existing building up to current elevation standards.

Regarding V-Zone construction, the Flood Hazard Area Control Act rules do not establish requirements or any restrictions with regard to FEMA zone designations and therefore do not define, refer to, or prevent V-Zone construction.

Regarding commenters' concerns related to the practicability of elevating the lowest floor of large residential buildings, or older brownstone and converted industrial buildings in urban settings, it has been the Department's experience that, in certain, limited situations, it may not be structurally, physically or economically possible or feasible to elevate buildings to meet the requirements of this rulemaking. In such a case, the Department has previously granted a hardship exception from strict compliance with the elevation requirements of the Flood Hazard Area Control Act rules, and has assisted the building's owner in determining other acceptable means of flood mitigation, such as flood-proofing. Note that a wet flood-proofed building, while sometimes permissible for non-residential buildings under the Flood Hazard Area Control Act rules, may result in extremely high flood insurance rates. FEMA or insurance providers should be consulted for more information regarding the insurance

implications of wet flood-proofing.

Regarding compliance with Federal Americans with Disabilities Act, the Department recognizes that the lowest floor elevation requirements under this rulemaking may require the construction of ramps or other means of barrier-free access to the elevated building, which may be difficult to construct given existing lot configuration and building location. However, the Department is confident that, in the majority of cases, barrier-free access will be able to be provided without creating a hardship on the building's owners. For example, the adopted rules permit enclosed access areas below the lowest floor of a building to accommodate stairs, ramps and elevators. Nevertheless, in cases where strict compliance with the rules would prevent necessary access, a prospective applicant can apply for relief from the Department's elevation standards under the hardship exception requirements in the Flood Hazard Area Control Act rules at N.J.A.C. 7:13-9.8. Note that a variance from local zoning boards or other government entities may also be required for non-conforming structures.

Regarding potential impacts related to increased flood insurance rates, these rates are set by FEMA through the National Flood Insurance Program and are not in any way influenced by this rulemaking. However, buildings elevated in accordance with the Flood Hazard Area Control Act rules will be subject to significantly lower insurance premiums than buildings that are not so elevated. Flood insurance premiums are a function of the elevation of the lowest habitable floor of a building in comparison with the 100-year flood elevation mapped by FEMA on its effective flood insurance rate maps. Different insurance rates apply in Zone A and Zone V. A building with a lowest floor above the 100-year flood elevation is at less risk of flooding, and thus can be insured at a lower rate than a building with a lowest

floor below the 100-year flood elevation. Each incremental increase in the elevation of the lowest floor of a building above the 100-year flood elevation results in an incremental decrease in the relative risk of flood damage to the building and in the corresponding flood insurance rate. Each incremental decrease in building elevation below the flood elevation has the opposite effect – the risk of flood damage increases and likewise the flood insurance rate will increase. More information regarding flood insurance rates is available from FEMA at www.floodsmart.gov.

A significant factor influencing construction and reconstruction within flood hazard areas is the rising cost of flood insurance. Under the Biggert-Waters National Flood Insurance Reform Act of 2012, long-term changes to the National Flood Insurance Program have been adopted which are likely to increase rates overall to more accurately reflect the flood risk to buildings in flood hazard areas. Individuals are therefore strongly encouraged to consider long-term insurance costs when undertaking reconstruction or elevation of damaged buildings. An investment to reconstruct the lowest floor of a building an additional foot or two higher today may translate into significant future flood insurance savings. As an example, FEMA flood insurance rates for a typical private residence with differing floor elevations are shown in the table below, as well as the number of years needed to reclaim the initial investment of constructing the lowest floor at a higher elevation:

Flood Insurance Rates for
$250,000 Residential Building Coverage
(Contents Not Covered)
FEMA flood insurance rates for AE-Zone[1] published October 2012

Lowest Floor Elevation	Annual Insurance Premium	Premium Compared to a Building with a Lowest Floor at 100-Year Flood Elevation	Time to Reclaim Added Cost of Elevating[2]
3 feet above	$376	72% savings	1.9 to 11.4 years
2 feet above	$448	67% savings	1.4 to 8.2 years
1 foot above	$660	51% savings	0.9 to 5.4 years
At 100-year flood	$1,359	NA	
1 foot below	$4,527	233% increase	
2 feet below	$5,924	336% increase	
3 feet below	$7,204	430% increase	
4 feet below	$9,551	603% increase	

[1] An "AE-Zone" is a type of A-Zone in which FEMA provides a base flood elevation. Most buildings along the coast that are in an A-Zone lie within an AE-Zone.

[2] Time to reclaim added cost of elevating based on a construction cost of $250,000 for a new building with an increase of between 0.25 percent and 1.5 percent for each foot above the FEMA 100-year flood elevation.

As illustrated by the table above, individuals constructing new houses have a significant incentive to construct the lowest floor of buildings well above the 100-year flood elevation, as the long-term savings in flood insurance premiums will substantially offset the added cost of higher construction. Even in cases where an existing house is being elevated on pilings or a masonry foundation, a significant flood insurance savings can be realized, depending on the existing elevation of the building's lowest floor, the initial flood insurance premium, and the final elevation of the lowest floor in comparison to the BFE.

9. COMMENT: Homeowners should not be required to build on pilings but should be allowed to use cement block foundations as a means of elevating because it is much more affordable. (12, 56, 146, 164)

   RESPONSE: The construction requirements for all buildings, including buildings located in flood hazard areas and Zone V, are set forth in the Uniform Construction Code at N.J.A.C. 5:23, which is promulgated by the New Jersey Department of Community Affair's and administered locally though building code officials. The Flood Hazard Area Control Act rules do not establish construction codes; they set forth the elevation that buildings in flood hazard areas must be constructed to, based on the design flood elevation as determined from State or FEMA flood mapping, or as calculated by an applicant. If the Uniform Construction Code requires a home be placed on pilings in order to meet the elevation required by the rules, then the local construction official will require the use of pilings during the review of the local building permit.

10. COMMENT: Several commenters stated that rather than require homes to be elevated, dunes and other flood control structures should be built. The only reason some homes were damaged was because a barrier island was breached. One commenter cautioned that decisions about installing dunes should be made on an individual basis as different areas of the shore have distinctive characteristics. Two commenters noted that development should not have been allowed on barrier islands or within high hazard coastal areas. (6, 34, 41, 65, 66, 115, 120, 124, 129, 131, 136, 154, 158, 181)

11. COMMENT: There should be a concerted effort to return floodplain areas and their buffers to natural conditions and to reestablish dunes and wetlands where possible. This is especially important for barrier islands that cannot be protected from storms. Structural solutions like sea walls may make flooding worse in some communities. The State should also explore buying flood prone properties and develop policies and practices that are more resilient in protecting and rebuilding our coast, rather than allowing people to repeatedly build in unsafe locations. (28, 173, 177, 181)

RESPONSE TO COMMENTS 10 AND 11: The Department agrees that elevating buildings is only one of many ways to help mitigate the deleterious effects of flooding. The State is committed to achieving sustainable, affordable and environmentally sound flood mitigation for New Jersey's flood prone areas. This effort will require a detailed analysis of Superstorm Sandy’s impacts to better understand the dynamics of coastal flooding and to ascertain which existing flood mitigation methods were successful. Developing a comprehensive plan will be complex and will require the cooperation of many agencies and communities. This rulemaking, which incorporates the best available flood elevation data and facilitates safer, more flood-resistant construction, is an important first step to achieving this goal.

12. COMMENT: Local building height restrictions will need to be modified to accommodate raising homes to the required elevations. (47, 52, 55, 68, 95, 101)

13. COMMENT: There should be no restriction imposing a maximum height of 28 feet for two-and-a-half story buildings. Neither should there be restrictions on the type of house being built. (68)

RESPONSE TO COMMENTS 12 AND 13: This proposal does not establish or affect height restrictions or zoning requirements, which are set and administered at the municipal level. However, given the extreme adverse social and economic impact realized by residents of buildings that are not properly elevated as required under this rulemaking, municipalities may wish to modify ordinances where necessary to remove any potential barriers to elevating buildings in accordance with the Flood Hazard Area Control Act rules.

14. COMMENT: The rule should allow people who already have flood hazard area permit from the Department to raise the elevation of the ground and buildings and/or to modify structural elements to achieve compliance with FEMA's ABFEs without requiring a modification of the flood hazard area permit. (142)

RESPONSE: This rule adoption does not affect any previously issued flood hazard area approvals. Applicants who have already received a flood hazard area approval may build to the elevation standards in effect at the time of the approval. However, in cases where a person has received a permit for a building but has not yet begun construction, the Department strongly recommends that the lowest floor be constructed in accordance with the requirements of the amended rules. In order to facilitate this, the person may avail him or

herself of the permit-by-rule at N.J.A.C. 7:13-7.2(a)3 for elevating an approved building. Note that modifying the design or location of an approved building will likely require local approval and that a change in designation from Zone A to Zone V will have certain design implications under the Uniform Construction Code. Furthermore, any change in the grading of a site needs Department approval, since this can alter drainage patterns and, in fluvial flood hazard areas, result in additional flood storage displacement, which is prohibited under N.J.A.C. 7:13-10.4.

15. COMMENT: Given the recent Florida sinkhole tragedy, if all or many homes are elevated under this rulemaking, can the State of New Jersey guarantee the integrity of our land so as not to experience similar sinkholes? (30, 31)

RESPONSE: Neither the Department nor the State can guarantee the suitability of a particular site for construction. Such a determination is necessarily the responsibility of the property owner in consultation with their design professional.

16. COMMENT: If elevation of a home is required under this rulemaking, including significant attendant costs, why are affected homeowners, who are not engineers, left to fend for themselves in accessing coastal flood maps to try and determine whether they are in a flood hazard area? This requires technical knowledge that most homeowners do not have, and is particularly a burden given that many homeowners are still working through casualty loss claims less than five months after Superstorm Sandy struck. (31)

RESPONSE: The Department recognizes the difficulty and complexity of the situation faced by residents in communities affected by Superstorm Sandy. Questions related to the Flood Hazard Area Control Act rules can be reached at www.nj.gov/dep/landuse or 1-866-DEP-KNOW (337-5669). Furthermore, FEMA has conducted several meetings throughout the coast and continues to do so to assist residents with understanding the effects of the new mapping on their properties and to assist in funding recovery efforts.

17. COMMENT: I live in a private beach association and would like to elevate my house higher than required under this rulemaking, both to increase the safety of my structure and to save on future flood insurance premiums. However, my landlord is preventing me from doing so, and is also preventing others from building to FEMA's recommended Coastal A-Zone standards. Can a landlord prevent us from exceeding State and Federal minimum standards? (4, 47, 55)

RESPONSE: The adopted amendments establish minimum standards for buildings that are being constructed, reconstructed, or are substantially damaged or improved, under the State's Flood Hazard Area Control Act. The Department encourages homeowners to build higher than required under this rulemaking. However, whether a landlord or homeowners association can restrict the height to which a structure may be raised beyond the minimum established in these rules may depend on many factors including, but not limited to, the municipal zoning ordinances governing the structure, deed restrictions or other covenants

placed on the property and the homeowners association agreement or bylaws. The Department therefore cannot respond to the commenter's specific question in the context of this rulemaking.

18. COMMENT: Because my shore property is a second home, I am being discriminated against by my community, the State and FEMA. (69)

RESPONSE: The Flood Hazard Area Control Act rules do not in any way differentiate between primary or secondary houses. All private residences under the jurisdiction of these rules are subject to the same regulatory requirements.

19. COMMENT: The Emergency Rule is inconsistent with Governor Christie's Executive Order No. 2 which requires all state agencies and departments to implement and adhere to Common Sense Principles concerning regulatory burdens. In particular the Emergency Rule promotes chronically high costs and regulatory burdens, was not transparent and was not crafted in such a manner so that they are understandable, consistent and predictable, does not encourage a competitive economy, does not treat businesses as partners, does not employ the use of cost/benefit analyses, as well as scientific and economic research from other jurisdictions, and does not detail and justify every instance where a proposed rule exceeds the requirements of Federal law or regulation. (75)

RESPONSE: Executive Order No. 2 was adopted to enhance the State's economic growth by reducing regulatory burdens and costs through the implementation of Common Sense Principles for Department and Agency rules and regulations. In part, rules and regulations are required to be transparent and predictable, consider cost-benefit analysis and economic and scientific research, and detail where the rule or regulation exceeds Federal requirements and justify that exceedence with a State-specific policy goal. The emergency rule and this concurrent adoption meet those standards.

This rule must be viewed in the context of the destruction caused by Superstorm Sandy and the need to rebuild expeditiously and more soundly. It also must be viewed in the context that FEMA's currently adopted BFEs are not protective of public health and safety, and are in the process of being revised. It would not be responsible for the State government to allow reconstruction to standards that we know are not protective and that are not based on the best available data. It was for these reasons that the Commissioner found an imminent peril and the need for the emergency rule of which the Governor concurred. The rule was also adopted on an emergency basis so that those persons who wanted to rebuild now, before FEMA adopts or officially proposes new BFEs, can do so in a manner that is reasonably protective both of their health and safety as well as financially considering the that FEMA will base its National Flood Insurance Premiums on the maps that they adopt. Allowing persons to build or rebuild to standards that the State knows would not be in conformance with FEMA standards would not be responsible. Persons do have the option of delaying construction or reconstruction until FEMA releases its proposed maps in the next several

months or when they are formally adopted. In the meantime, these rules provide a safe standard that persons can reasonably rely upon.

Contrary to the Commenter's statements, this regulation does encourage economic growth by providing clear standards that a person can meet. Those standards are based on the best available data and analysis consistent with Executive Order No. 2. The regulation was also premised on a cost-benefit analysis that considered NFIP premiums for structures that complied with the final adoption of the BFEs and those that did not. Finally, this rule is consistent with Federal standards as it uses the ABFEs that have been established by FEMA as the basis for determining the 100-year flood elevations.

This rule is also consistent with other requirements of Executive Order No. 2 in that in provides flexibility by allowing an individual to obtain a flood hazard verification pursuant to N.J.A.C. 7:13-6 which can modify the base flood elevation on a specific site. The rules also contain other mechanisms by which to consider individual hardships and circumstances. The rule simplifies regulatory burdens by allowing the reconstruction of structures through a permit by rule, seeks to lessen regulatory burdens in urban areas and for commercial structures by allowing wet flood proofing, and seeks consistency of regulations with other State agencies by eliminating the requirement that basements leave one side open.

20. COMMENT: This rulemaking will create an environmental disaster along the shore given the vast amount of waste that will be generated from the many structures that will be demolished and replaced to comply with the proposed building requirements. (64)

RESPONSE: The focus of this adoption is to help people directly affected by the storm to rebuild stronger and more resilient in order to reduce future potential exposure to flooding and the damage it causes. While these amendments do not directly address the debris that will be generated during the State's rebuilding effort, the Department has developed a debris management strategy in response to Superstorm Sandy which can be accessed from the Department's website at www.state.nj.us/dep/special/hurricane-sandy or 1-866-DEP-KNOW (337-5669).

21. COMMENT: We object to the continued propagation of maps or reliance thereon which reflect a Coastal A-Zone without a concomitant required regulatory scheme. The State should take an official position either recognizing the existence of Coastal A-Zones or mandating their removal from FEMA's flood maps. We believe the reference to these new zones is a precursor to Federal implementation of special standards and flood insurance rates in Coastal A-Zones in the future, and that our residents could thereby subsidize other areas of the country. (83)

22. COMMENT: Why does FEMA designate Coastal A-Zones when people in Coastal A-Zones are encouraged to build to V-Zone standards? (58)

RESPONSE TO COMMENTS 21 AND 22: In addition to flood elevations, FEMA Flood Insurance Rate Maps in tidal areas indicate the relative height of waves that a property or

community will likely experience during a coastal flood. Areas within Zone V are expected to experience wave heights of at least three feet, while areas within Zone A are expected to experience wave heights of less than three feet. A subset of Zone A in tidal areas is known as a Coastal A-Zone, within which waves during a flood are anticipated to be between one and a half and three feet in height. Due to the relatively high hazard to construction in Zone V, special floodplain management requirements generally apply, including the requirement that buildings be constructed on open foundations. These construction standards are administered by the State's Department of Community Affairs through each municipal floodplain administrator and construction official. While some sources recommend that buildings in Coastal A-Zones be constructed using V-Zone construction standards, the State does not require additional construction standards or permitting requirements in Coastal A-Zones.

Regarding the commenter's request that the State should take an official position either recognizing the existence of Coastal A-Zones or mandating their removal from FEMA's flood maps, the State cannot dictate to FEMA what information it includes on its flood maps. Regarding potential impacts related to flood insurance rates, these rates, as noted in the response to comments 7 and 8, are set by FEMA through the National Flood Insurance Program. The Department therefore cannot respond to the commenter's specific concern in the context of this rulemaking.

23. COMMENT: The proposed amendments do not fully conform to the requirements of the National Flood Insurance Program or the Uniform Construction Code. The proposal contains many provisions that are more specific than the NFIP and many that exceed the minimum

NFIP, in large part due to specificity rather than reliance on broad performance expectations. However, some provisions are not consistent with either UCC or the NFIP; in some cases N.J.A.C. 7:13 is more stringent than both UCC and NFIP, in other cases N.J.A.C. 7:13 less stringent. For example, the definitions of "flood-proofing", "lowest floor", "substantial damage", and "substantial improvement" vary from the UCC and NFIP definitions. However, the definition of "multi-residence building" is consistent with UCC and NFIP. Furthermore, the Flood Hazard Area Control Act rules do not follow NFIP and UCC in that there are no distinctions between Zone A and Zone V. Nor does N.J.A.C. 7:13 contain specific V-Zone construction requirements, which means that in some cases the lowest floor of a building elevated under N.J.A.C. 7:13 will not meet minimum UCC requirements. The requirements for the use of enclosed areas below the lowest floor of a building differ from NFIP standards, and N.J.A.C. 7:13 permits wet flood-proofing of buildings, which is not allowed under NFIP specifications. With respect to buildings, the primary focus of the rule is specification of elevation of the lowest floor. The rule does not address specifics about foundation in coastal high hazard areas, such as pilings, columns and "free-of-obstruction" requirements. Finally, there is no mention of breakaway walls and all walls of enclosures are required to have openings. (85, 141)

RESPONSE: Although the Department recognizes many benefits afforded to communities that comply with National Flood Insurance standards, the Department did not, as part of this rulemaking, intend to compare the requirements of the Flood Hazard Area Control Act rules with the NFIP or attempt to fully achieve compliance with its standards. The purpose of this

rulemaking is to facilitate the safe, efficient and sustainable recovery of the New Jersey's eastern waterfront, which withstood unprecedented damage from Superstorm Sandy.

The Department recognizes that the requirements of N.J.A.C. 7:13 in some regards differ from the standards of the National Flood Insurance Program. As noted by the commenter, N.J.A.C. 7:13 is in some cases more stringent than NFIP standards. For example, the Department requires that the lowest floor of buildings in flood hazard areas be constructed at least one foot above the flood hazard area design flood elevation, which results in buildings that are at least one foot higher than NFIP in tidal areas and at least two feet higher than NFIP in fluvial areas. In other cases, N.J.A.C. 7:13 does not address requirements covered by the NFIP, such as specific construction standards. This is appropriate because the construction requirements for all buildings in New Jersey, including buildings located in flood hazard areas and Zone V, are set forth in the Uniform Construction Code at N.J.A.C. 5:23, which is promulgated by the New Jersey Department of Community Affairs and administered locally though building code officials. The Flood Hazard Area Control Act rules rather set forth the elevation that buildings in flood hazard areas must be constructed to, based on the design flood elevation as determined from State or FEMA flood mapping, or as calculated by an applicant. Finally, while not a goal of this rulemaking, the Department believes that many of the adopted amendments do incorporate NFIP requirements, such as requiring substantially damaged or improved buildings to conform to the higher elevation standards of N.J.A.C. 7:13.

Public Review

24. COMMENT: Commenters indicate that there should be more than one hearing on these changes and that the rulemaking must be discussed in greater detail before implementation. Some commenters stated that instead of a hearing, there should be meetings with representatives of all involved to discuss issues and explain what is being done. (3, 18, 26, 27, 31, 120, 125, 129)

RESPONSE: A thirty-day public comment period was provided, as provided under the APA for a concurrent proposal published as part of an emergency rule. The Department held an evening public hearing in an affected shore community to accommodate potential commenters' schedules. Notice of that hearing was provided in the emergency rule and concurrent proposal, on the Department's website, to the media outlets in the Statehouse, by email to the Department's rulemaking listerv, by press release, and by direct notice to the mayors of affected municipalities. A total of 185 individuals and agencies submitted comments, all of which are summarized and addressed in this adoption. Therefore, the Department believes that there was ample opportunity to provide comments and discuss the rulemaking.

25. COMMENT: The emergency rulemaking that incorporated FEMA's ABFEs bypassed the valuable scrutiny that should have been afforded to all stakeholders. (34)

26. COMMENT: I question the Department's compliance with the standards of the Administrative Procedure Act by: (1) not allowing for examination of the Department or FEMA's experts regarding the data relied on in for the ABFEs; (2) only holding one public hearing; (3) relying on FEMA's maps rather than DEP doing its own analysis and claiming it reflects a lack of evidence supporting the change; (4) failing to prepare the required impact statements. (108)

27. COMMENT: The rule should have been issued as a proposal for public review and comment, and not as an emergency adoption. (36)

RESPONSE TO COMMENTS 25 THROUGH 27: The Administrative Procedure Act (APA) at N.J.S.A. 52:14B-4(c) sets forth a process whereby a State agency can adopt regulations on an emergency basis, provided certain conditions are met. All requirements of the APA were fulfilled through this rule adoption. Due to the unprecedented flooding along New Jersey's eastern waterfront, the Department's Commissioner determined that an imminent peril to the health, safety and welfare of the citizens of New Jersey justified the emergency adoption of these flood hazard amendments. The Commissioner's determination was certified by the Governor , and the amendments became effective for sixty days upon acceptance for filing by the Office of Administrative Law pursuant to N.J.A.C. 1:30-6.6(b). Concurrently, the Department proposed the amendments for public comment pursuant to the rulemaking requirements of the APA. There was a 30-day comment period and a public hearing. The Department provided notice of the proposal and the hearing on the Department's website, to

the media outlets in the Statehouse, by email to the Department's rulemaking listserv, by press release, and by direct notice to the mayors of affected municipalities.

With regard to the commenter's concern that the Department held only one public hearing on this rulemaking, as noted in the response to comment 24, the Department believes that one public hearing, in conjunction with opportunities to submit comments electronically and through more traditional means as well as the early web posting and the other notices provided to complying with the APA, adequately provided individuals with an opportunity to provide comments.

With regard to the incorporation of FEMA's ABFEs prior to FEMA's public map adoption process, as set forth in its regulations at 44 CFR 66.1 through 67.11, the Department recognizes that the ABFEs have been provided by FEMA on an advisory basis. However, FEMA's ABFEs also represent the best available flood data. Therefore, unless an applicant demonstrates a different design flood elevation is appropriate, as reviewed and approved by the Department through an application for a flood hazard area verification, the Department requires the use of FEMA's ABFEs

N.J.A.C. 7:13-1.2 Definitions

28. COMMENT: The proposal summary explains that the definition of "crawl space" is being deleted because it is not used in the amended individual permit requirements for buildings. However, the term is, in fact, used in the definition of "lowest floor." It may make more sense to revise the definition of crawl space to eliminate the height limitation, but stipulate

that is not habitable space, or add another definition that describes non-habitable space in a flood zone below the lowest floor. (64)

RESPONSE: The commenter is correct that the term "crawl space" is used in the definition of "lowest floor" as an example of an enclosed area that is not considered to be the lowest floor of a building. The definition of "crawl space" deleted under this rulemaking had previously been incorporated in the Flood Hazard Area Control Act rules to specify a particular type of enclosed area that was limited in height, and therefore subject to the requirements of previous N.J.A.C. 7:13-11.5(m). Since these requirements have also been deleted, a definition of "crawl space" is no longer necessary, as the term is used in its generally recognized context in the definition of "lowest floor" and is also provided as an example of a non-habitable area, which accomplishes the commenter's suggestion.

29. COMMENT: The definition of "FEMA 100-year flood elevation" should be clarified with regard to the reliance on advisory or proposed flood elevations. I believe the Department's intention is not to use preliminary advisory or proposed flood elevations in the event that they are ultimately adjusted lower or corrected by FEMA. However, the definition could be construed that even if a preliminary publication of a flood hazard elevation shows a higher elevation than a future adjusted one, the Department could regulate to that higher, more conservative and potentially erroneous value. (164)

30. COMMENT: The rule should incorporate a process to adopt the FEMA Preliminary Maps when they are released, to replace the ABFEs. Without an automatic process for this adoption, I am concerned that a separate emergency rule will be required to adopt the Preliminary Maps, and will introduce additional uncertainty. (142)

RESPONSE TO COMMENTS 29 AND 30: The purpose of the adopted definition of "FEMA 100-year flood elevation" is to ensure that the most recent and accurate flood elevation at a given site is used for the construction of buildings and for general compliance with the requirements of this chapter. In anticipation of revising its Flood Insurance Rate Maps, FEMA first issues proposed or preliminary mapping for public comment and review. In some cases, such as after a significant flood event like Superstorm Sandy, FEMA releases mapping products that are currently under development on an advisory basis, in order to help guide an area's recovery. As noted in previous responses, FEMA released its ABFEs in December 2012. The definition of "FEMA 100-year flood elevation" therefore sets forth how advisory, proposed (preliminary) and effective BFEs are incorporated as part of Methods 2 and 3 at N.J.A.C. 7:13-3.4, which describe how to determine the flood hazard area design flood elevation from FEMA mapping.

The definition of "FEMA 100-year flood elevation" provides that this elevation is the most recently released effective FEMA base flood elevation, or any more recent advisory or proposed flood elevation, if either elevation is higher. So, for example, if the effective BFE is 9 feet and FEMA releases an advisory BFE that is 11 feet, then the FEMA 100-year flood elevation is equal to the advisory BFE of 11 feet. If FEMA later releases a proposed BFE of

10 feet, then, because the proposed flood elevation is the most recently released, and since it is higher than the effective BFE, the FEMA 100-year flood elevation would be the proposed BFE of 10 feet. However, if FEMA releases an advisory or proposed BFE that is lower than the effective BFE, neither the advisory BFE nor the proposed BFE will affect the "FEMA 100-year flood elevation" used under the Flood Hazard Area Control Act rules. Therefore, in no case can the FEMA 100-year flood elevation be less than the effective BFE. Finally, when FEMA completes its map adoption process and the proposed map becomes effective, the adopted definition of "FEMA 100-year flood elevation" will ensure that the elevation and zone designation shown on the effective map will supersede the previous advisory and proposed maps, even if the advisory or proposed map that were released prior to and in support of the effective map depicted a higher flood elevation or a different zone designation.

31. COMMENT: We oppose the proposed definition of "flood-proofing" that includes wet flood-proofing. Allowing floodwaters to enter a building does not provide the protection dry flood-proofing does. A wet flood-proofed building does not control the force of floodwaters that can destabilize the building and floating debris can damage open structures when being carried through the building. The rulemaking's goal should be to prevent any floodwater from entering, rushing through and potentially destabilizing a structure. Also, flow-through of floodwaters will be able to carry pollution and debris to the waterway from the structure. (28, 177)

RESPONSE: The adopted amendments allow the use of flood-proofing in limited cases for non-residential buildings that cannot practicably or feasibly meet the elevation requirements of these rules. As defined at N.J.A.C. 7:13-1.2, "wet flood-proofing" refers to measures that allow floodwaters to enter a building, and thereby balance hydrostatic pressure on the structure during a flood. Wet flood-proofing generally includes using flood-resistant materials, protecting mechanical and utility equipment, and using openings or breakaway walls. "Dry flood-proofing" refers to measures that prevent floodwaters from entering a building. Dry flood-proofing generally includes making the building watertight through sealing openings, installing waterproof doors and windows, or sealing walls with waterproof coatings, impermeable membranes and/or a supplementary layer of masonry or concrete. Wet flood-proofing does not protect the building's contents from being flooded and also can result in extremely high flood insurance premiums. However, it has been the Department's experience that, in some cases, dry flood-proofing can be cost-prohibitive as well as physically impractical to implement. The Department anticipates that most buildings will be elevated in accordance with these rules, or, where elevating is not practical, dry flood-proofed. However, in situations where dry flood-proofing is not practical, wet flood-proofing remains an alternative to dry flood-proofing for non-residential buildings.

With respect to the commenter's concern that floodwaters flowing through wet flood-proofed structures can carry away pollution and debris that could adversely impact waterways, the Department recognizes the potential impact that any construction or human occupation in flood hazard areas may cause. In order to minimize such impacts, wet flood-proofing is available only for non-residential buildings and only in cases where neither

elevating above the flood hazard area nor dry flood-proofing are feasible. It should also be noted that, had all buildings been constructed in accordance with the requirements of this rulemaking prior to Superstorm Sandy, the amount of debris in New Jersey's waterways would have been substantially less than what was experienced after Superstorm Sandy. The Department believes that the requirements in this rulemaking will ultimately reduce the overall amount of debris and pollution that could enter the waterways of the State following a flood event.

32. COMMENT: We oppose the proposed definition of "lowest floor" and associated provisions that will allow enclosed areas below the design flood elevation to be used as a garage, storage space, and parking area, such as for a private residence or multi-residence building. Motor vehicles and typical homeowner items such as small engines, lawnmowers, fuel, and lawn care and household chemicals are all potential pollution sources that can have significant water quality impacts during a flood. These should not be allowed on the lowest floor of a structure below the design flood elevation. (28, 177)

RESPONSE: As noted in the response to comment 31, the Department recognizes that human occupation of flood hazard areas can lead to potential environmental impacts. The Flood Hazard Area Control Act rules seek to minimize these potential impacts, while also recognizing that a significant percentage of the State's population resides and/or undertakes daily activities in flood hazard areas. The Department believes that a total prohibition on storage below the flood hazard area design flood elevation would in many cases be

impractical, as well as impossible for the Department to enforce. However, in order to reduce potential impacts related to the storage of material in flood hazard areas, N.J.A.C. 7:13 allows the construction of a garage for a private residence, which is situated below the design flood elevation, only if the lot on the garage is constructed was created prior to the November 5, 2007, adoption of this chapter. The lowest floor of all other garages for private residences must be elevated at least one foot above the design flood elevation. Further discussion related to this requirement can be found in the response to comments 85 and 86.

33. COMMENT: The definition of "substantial damage" refers to the market value of a structure before damage has occurred. However, the market value of a structure is very subjective and open to dispute. It would furthermore be difficult to assess the market value of a structure before damage has occurred without having an appraisal before October 28, 2012. In light of the above, and in considering that the appraised value, tax assessed value, and replacement value of a building are not often the same, the percentage of damage should instead be based on some other metric, such as the area of materials being used to rebuild the structure. (64)

RESPONSE: The adopted definition is consistent with the definition of "substantial damage" in the 2009 International Residential Code (IRC), which is adopted by reference in New Jersey's Uniform Construction Code at N.J.A.C. 5:23-3.14(a), and the Code of Federal Regulations at 44 CFR 59.1, which includes definitions applicable to FEMA's regulations for flood insurance and hazard mitigation. Substantial damage determinations are made by municipal construction officials. In cases where a recent appraisal is not available for

comparison, municipalities employ methods to estimate the market value of a house prior to damage.

34. COMMENT: The definition of "substantial damage" attempts to limit the right to restore nonconforming structures to situations where damage is less than a specified percentage of the replacement value. This type of ordinance was held to be invalid in H. Behlen & Bros. v. Mayor, etc., Town of Kearny, 31 N.J. Super. 30, 39 (App. Div. 1954), according to William M. Cox's reference "New Jersey Zoning and Land Use Administration." (64)

RESPONSE: By requiring substantially damaged buildings to be raised to safer elevations, the Department is helping to ensure that buildings with a high risk of repetitive flood damage are reasonably flood-resistant in order to preserve the safety of present and future occupants. The requirement to meet safer construction codes does not limit the right to restore a structure and the issue of continuation of nonconforming structures is dealt with on the municipal level. In cases where elevating a structure would present an undue hardship, a prospective applicant can apply for relief from strict compliance from the Department's elevation standards under the hardship exception requirements in the Flood Hazard Area Control Act rules at N.J.A.C. 7:13-9.8.

35. COMMENT: We agree that the newly defined term "substantial damage" uses the correct point of reference for valuation and comparison purposes of structures in that it refers to "the market value of the structure before the damage occurred". However, the newly defined term

"substantial improvement" and the amended terms "repair" and "reconstruction" are not consistent with this proposed definition and instead compare the value of the improvements to the market value of the building "before the start of construction". This could be understood to require individuals to take into account the building's value after damage, meaning that almost any repair or reconstruction could render a project ineligible for the permits-by-rule at N.J.A.C. 7:13-7.2(a)3 and (b)7, as well as the individual permit requirements at N.J.A.C. 7:13-11.5(h). We therefore recommend that the language in the above terms should be changed to be consistent with "substantial damage" by referring to the market value "before any damage" rather than "before the start of construction". (175)

36. COMMENT: The definition of substantial improvement has been modified to be 50 percent or more of "market" value of a property, where the prior rules defined substantial improvement as 50 percent of "replacement" value. In a depressed real estate market, replacement value is generally much higher than market value. Therefore the amended definition will result in more buildings being considered "substantially damaged." (83, 117)

37. COMMENT: The distinction and relationship between "substantial damage" and "substantial improvement" should be clarified as these terms cross-reference each other. (175)

RESPONSE TO 35 THROUGH37: The definitions of "substantial damage" and "substantial improvement" at N.J.A.C. 7:13-1.2 are consistent with the definitions of these terms in FEMA's regulations for Insurance and Hazard Mitigation at 44 CFR 59.1 as well as section

1612.2 of the 2009 International Residential Code, which is incorporated by reference in the Uniform Construction Code at N.J.A.C. 5:23-3.14(a). "Substantial damage" is intended to be a measurement of damage that a structure has sustained, and therefore compares the cost of restoring the structure to its pre-damaged condition to its pre-damage market value. A structure can therefore be considered substantially damaged even if no repairs have or will be undertaken. "Substantial improvement," however, is a measurement of financial investment to improve a structure, and therefore compares the cost of the intended improvements to the structure with the structure's pre-construction market value. Since "substantial damage" measures unintentional impairment and "substantial improvement" measures intentional enhancement, it is appropriate that these terms refer to the market value of the structure before damage or alteration have occurred. For the same reasons, the adopted definitions for "repair" and "reconstruct" both refer to the pre-construction market value of the structure, since these terms, like "substantial improvement" measure intentional enhancement of a structure.

Determining the flood hazard area and floodway (N.J.A.C. 7:13-3.2, 3.4, 3.5 and 3.6)

38. COMMENT: The rule allows challenging FEMA's ABFEs and V-Zone designation under a flood hazard area verification. However, while calculating flood elevations in fluvial areas is commonly done, it is much more complicated in tidal areas, since numerous factors can affect tidal flood elevations, such as wave action, barometric pressure, coastline geometry, temperature, precipitation, attenuating structures, etc. It is very difficult to incorporate these

factors into a model and accurately determine what elevation has a one percent probability of occurring annually. Furthermore, such modeling is expensive to perform, and there is nothing to compare it to, since the method that FEMA used to compute the stillwater elevation is unavailable and FEMA has not yet completed its wave height analysis. (48)

39. COMMENT: While the rules allow a person to calculate their own flood hazard area on their particular site, it seems impractical for the average homeowner to accomplish this analysis without undue expense, and the extent of the areas in question would require an inordinate number of property owners to undertake such a study. (64)

RESPONSE TO COMMENTS 38 AND 39: As noted in response to comments 2 through 5, tidal flood elevations are determined by adding the height of waves to the tidal stillwater elevation. Since FEMA has calculated stillwater elevations along New Jersey's eastern waterfront using the most accurate modeling methodologies and climatologic data available, it is not likely that further modeling would result in different stillwater elevations or be practical for applicants to undertake. However, since FEMA has not yet completed its wave height analysis, the ABFEs were developed using approximate wave heights in accordance with the recommendations of the National Academy of Sciences. A private entity, such as a homeowner, could therefore secure the services of an engineering consultant to perform a detailed wave height analysis at a given location that incorporates local topography. Such an analysis would determine the attenuating ability of buildings and other structures along the coast, which may result in a different wave height and subsequently change the design flood

elevation. It has been the Department's experience that such an analysis is similar in cost and effort to a hydrologic and hydraulic analysis to determine the design flood elevation along a fluvial water, which is commonly undertaken by applicants in accordance with N.J.A.C. 7:13-3.6. This is consistent with FEMA's process for individuals who wish to challenge a proposed map. For example, FEMA encourages local officials and property owners to submit technical information that will better characterize local conditions. Work that is now being conducted to refine the ABFEs will help develop the preliminary Flood Insurance Rate Maps for New Jersey communities that are scheduled for release in mid-2013. Once adopted by communities, these FIRMs will help ensure that flood hazards are taken into consideration as decisions are made to become more resilient and sustainable in the face of future flooding events.

40. COMMENT: The rule seems to imply that previous work performed by the Department to delineate flood hazard areas along certain waterways is inaccurate. We believe that all previous NJDEP studies (of fluvial systems) should still be valid for determining an appropriate flood hazard area. If the NJDEP does not believe the studies are valid, then they should be eliminated from Appendix 2: List of Department Delineated Waters. (36)

41. COMMENT: N.J.A.C. 7:13-3.2(a) explains an applicant's choice is relevant in selecting a flood hazard area method, but N.J.A.C. 7:13-3.2(b) provides that people must use new delineations if they exist. This is misleading. (175)

42. COMMENT: Regarding N.J.A.C. 7:13-3.2(b), the Department should allow any applicant to perform a site specific study, even if the Department delineation for a regulated water has been performed. The preamble to the rule clearly finds that previously performed Department studies may be inaccurate. Future studies prepared by the Department may also be inaccurate. We believe that this section of the Rule should allow any applicant the right to perform site-specific studies to determined flood hazard areas and floodway limits even when Department studies for the regulated water have been completed. It should not be the highest elevation from a variety of studies, but the most accurate based on sound engineering principles. (36)

RESPONSE TO COMMENTS 40 THROUGH 42: With the exception of Department delineations that depict elevations lower than FEMA's ABFEs and the previous Department delineation of fluvial portions of the Delaware River that were by replaced by FEMA's updated mapping on January 24, 2013, the Department believes that its previous flood hazard area delineations are accurate. The Department recognizes that, as better topographic, climatological, hydrologic and hydraulic data and modeling methodologies becomes available, the accuracy at which existing flood hazard areas can be mapped increases accordingly. FEMA is furthermore undertaking a comprehensive effort to update its floodplain mapping in New Jersey, which the Department anticipates may alter flood elevations in some cases. FEMA's new mapping will also include the Department's flood hazard area design flood elevation, so that Department delineations are more easily accessible to the public through FEMA's online mapping service center at

www.msc.fema.gov. Given the above, the Department has adopted N.J.A.C. 7:13-3.3(c), which provides that any flood hazard design elevation and floodway limits for a regulated water depicted on an effective FEMA map is automatically incorporated into this chapter as a Department delineation .

N.J.A.C. 7:13-3.2 is also amended to ensure that the design flood elevation is based on the most recent accurate flood hazard area data available. Under this rulemaking, a distinction is made between Department delineations promulgated prior to January 24, 2013, which is the effective date of the emergency amendments, and Department delineations promulgated on or after this date. For delineations promulgated on or after January 24, 2013, in accordance with new N.J.A.C. 7:13-3.3(c), the Department is confident that such mapping represents the best available flood data. Therefore, the flood hazard area design flood elevation and floodway limits shown on these delineations must be used, and cannot be amended through a flood hazard area verification under N.J.A.C. 7:13-6. However, an applicant can apply to amend a Department delineation through the process set forth at N.J.A.C. 7:13-13.4. Furthermore, as FEMA updates mapping promulgated under N.J.A.C. 7:13-3.3(c), these updated will be automatically incorporated as revised Department delineations.

Where a Department delineation was promulgated prior to January 24, 2013, the flood hazard area and floodway limits can be determined using one of two options set forth at N.J.A.C. 7:13-3.2(c). Under the first option either a Department delineation or FEMA mapping is used, whichever results in a higher flood hazard area design flood elevation and

wider floodway limit. Under the second option, where a Department delineation was promulgated prior to January 24, 2013, a person may calculate the flood hazard area design flood elevation and floodway limits on a site, performing a localized analysis using site-specific data, which may result in a refinement of the flooding dynamics at the site and produce a more accurate picture of small variations in flood elevations or floodway limits applicable to that particular site. In the absence of any Department delineation or FEMA mapping for a regulated water, the amended rules continue to allow the use of FEMA flood mapping, provided such mapping is available; or the calculation of the flood hazard area design flood elevation using various methods set forth in subchapter 3; or, in the absence of a Department delineation or FEMA flood mapping, the approximation of the flood hazard area design flood elevation in certain circumstances. The Department believes that the adopted rule both provides maximum flexibility to prospective applicants while ensuring that the most accurate flood data available is employed under this chapter.

43. COMMENT: The Department should clarify whether applicants can perform their own studies to challenge a V-Zone designation under N.J.A.C. 7:13-3.2(d)3. (175)

44. COMMENT: While the FEMA ABFE elevations are immediately utilized in determining the flood hazard area elevation under N.J.A.C. 7:13-3.2(c), these elevations are not adopted "as the Department delineation of the regulated water" until they reflect FEMA's "final" determination of the 100-year flood elevation pursuant to N.J.A.C. 7:13-3.3(c). Applicants

intending to challenge a Department delineation must furthermore adhere to N.J.A.C. 7:13-3.3(d) and 13.4. The rulemaking appears to be inconsistent with the Department's online guidance which purports that FEMA's ABFEs can be challenged for NJDEP permitting purposes, but that a successful challenge to FEMA's ABFEs would immediately expire upon FEMA's ultimate adoption of the ABFE as the BFE. (175)

RESPONSE TO COMMENTS 43 AND 44: As noted in the response to comments 40 through 42, an applicant can, in any case other than where a Department delineation has been promulgated under N.J.A.C. 7:13-3.3(c) on or after January 24, 2013, submit flood hazard area calculations to the Department under a verification pursuant to N.J.A.C. 7:13-6. If the Department agrees that the verification application accurately reflects the flood hazard area and floodway limits for the site in question, the Department will approve the verification and this flood data can be used to obtain a flood hazard area permit in lieu of any previous Department delineation or FEMA flood mapping on that site. This includes both fluvial and tidal flood hazard areas, as well as revised V-Zone determinations. Since the only Department delineation adopted on or after January 24, 2013, currently consists of the Delaware River study in Sussex, Warren and Hunterdon Counties, site-specific calculations can be used in lieu of any other Department delineation or FEMA mapping in the State, provided the calculations are reviewed and approved by the Department under a flood hazard area verification. The Department can then issue flood hazard area and coastal permits using such verified flood elevations and zone designations. However, as new and revised mapping is incorporated as a Department delineation under N.J.A.C. 7:13-3.3(c), such a delineation

must be used for any subsequent approvals issued by the Department. For example, a person who does not agree with FEMA's advisory mapping can recalculate flood conditions on a site and apply for a flood hazard area verification, which the Department can then use to approve flood hazard area and coastal permits in lieu of FEMA's ABFEs. However, once FEMA formalizes its coastal mapping through the Federal map adoption process, and such maps become incorporated as Department delineations under N.J.A.C. 7:13-3.3(c), the Department will use the Department delineation for future permit applications after the expiration of the verification. A new or revised Department delineation would not invalidate a previously approved valid verification or permit that was based on previous flood information.

45. COMMENT: My home was built using datum NGVD 1929. Why was the datum changed on FEMA's ABFEs? (74)

RESPONSE: A "datum" is a reference point that surveyors use to compare one set of elevations to another. Both the National Geodetic Vertical Datum of 1929 (NGVD) and the North American Vertical Datum (NAVD) of 1988 set elevation zero at mean sea level. Given significantly improved and scientifically accurate geographic data is available today as compared with the information available in 1929, NAVD is a more accurate reference point. Therefore, while older flood maps refer to NGVD, most recent flood maps including the ABFEs refer to NAVD. The change from NGVD to NAVD merely changes the reference point from which flood elevations are measured and does not affect how high flood waters

will be. Depending on the location in New Jersey, the 1929 datum is roughly one foot below the 1988 datum. So, a map showing a flood elevation of 10 feet NGVD would be equal to approximately 9 feet NAVD. One datum can be converted to the other at a given location and altitude using the application provided at www.ngs.noaa.gov/cgi-bin/VERTCON/vert_con.prl. It is important that the property survey, elevation certificate and flood mapping source use the same datum; otherwise, the depth of flooding on site could be underestimated.

46. COMMENT: What is the starting point to determine revised elevation levels in accordance with the new flood hazard rezoned areas? (31)

RESPONSE: The datum used for FEMA's ABFEs is the North American Vertical Datum (NAVD) of 1988, which sets elevation zero at mean sea level. Thus, a 100-year flood elevation of 10 feet NAVD indicates that floodwaters are expected to reach a peak height of 10 feet above sea level during a 100-year flood event.

47. COMMENT: The regulatory floodplain should be defined by the 500-year flood rather than the 100-year flood, as this will provide important protection from flooding and reduce flood damage by reflecting more accurately areas that can be expected to flood in the coming years as storm surges, flood flows and frequency continue to increase. (28, 177)

48. COMMENT: The rulemaking does not recognize or build in any recognition of sea level rise, storm severity and frequency or any other effects of climate change. At the very least, the rule should require an additional percent to be added to flood elevations based on sea level rise that will result from climate change. (28, 177)

49. COMMENT: FEMA, through NFIP regulations, encourages states to adopt standards that exceed Federal minimums as a means to mitigate current and future storm and flood damages and associated costs. This will become increasingly important with the increases in sea level that have been observed for decades. FEMA mapping reflects static conditions at the time the mapping is published. While the maps are completed with the best available data, by the time these insurance products are adopted by the municipality, they are already out of date, under-representing future conditions and associated risk. Such mapping is based on a relatively short history of flooding and rainfall, hydrologic calculations that have a significant inherent error, and other variables such as future development that are not accounted for in calculations to determine flood heights or velocities. Higher standards are needed to offset this uncertainty in future flood risk. (126)

50. COMMENT: Sea level rise and erosion of our coast is real and movement of barrier islands has been taking place for a long time. FEMA maps only take into account statistics from prior storms and do not take into account potential future climatic changes. We could actually be building in places that we should not be, but we will not know until the final

maps are done and the science is complete. We could end up creating more flooding in some areas for the people that have already been impacted. (173)

51. COMMENT: Climate change is real. As the planet and the ocean warms, the ocean expands, glaciers and arctic ice melts. That increases the volume of the ocean and that results in sea level rise. It's going to happen at a more accelerated rate in the future. We have to plan for that and we have to adapt to that. Climate change also causes more extreme weather events due to the warming of the ocean and warm moisture in the atmosphere. Testimony about Superstorm Sandy being a 500 or 700 year storm cannot be scientifically credible or statistically valid. (181)

52. COMMENT: In January of 2012, before Superstorm Sandy hit, FEMA adopted a climate change adaptation policy that explicitly called for future risk to be incorporated in the FEMA programs, including projected conditions. That represented a significant change in FEMA policy because FEMA had previously dealt with historical data and not projected conditions. However, FEMA’s ABFEs do not comply with FEMA’s own policy because they reflect historic conditions and do not project forward. (181)

53. COMMENT: We support maintenance of higher standards, especially with respect to the freeboard for structures, and recommends that the freeboard be increased to two feet in future modifications in N.J.A.C. 7:13. (126)

RESPONSE TO COMMENTS 47 THROUGH 53: The Department recognizes that the extent of flooding within the State can increase over time due to a variety of factors. In response to this, the Flood Hazard Area Control Act rules were amended in 2007 to require that the lowest floor of buildings and the elevation of many roadways and parking areas be situated at least one foot above the flood hazard area design flood elevation. The Department also regulates a flood larger than the 100-year flood in fluvial areas to account for possible future changes in flood elevations. This rulemaking incorporates additional amendments that ensure construction activities in New Jersey will utilize the most recent and accurate flood mapping available. The use of FEMA's ABFEs and automatic incorporation of effective FEMA maps that depict the Department's flood hazard area design flood elevation ensure that the State will not rely on outdated or inaccurate flood mapping. Furthermore, should FEMA incorporate additional risk factors into its depiction of the 100-year flood elevation on its Flood Insurance Rate Maps, these changes will be automatically incorporated into the Department's delineations. As the Flood Hazard Area Control Act rules are set to expire on November 7, 2014, the Department will again have an opportunity to review the best available data and risk indicators and determine if additional rule amendments are necessary.

54. COMMENT: It is requested that the Department accept site-specific topographic survey data, in combination with flood elevations depicted on FEMA's ABFEs, in order to determine the extent of flooding on a particular site, rather than simply considering the flood hazard areas depicted on FEMA's ABFEs to be the actual extent of the flood hazard area. It is also requested the Department incorporate into the Flood Hazard Area Control Act rules a clear

process for individuals to provide updated information so that the Department consistently utilize the best available information in making permit decisions. (142A)

RESPONSE: The Department will accept and consider site-specific flood calculations and/or topographic survey data under an application for a flood hazard area verification pursuant to N.J.A.C. 7:13-6. A verification is a document containing the Department's approval of the flood hazard area design flood elevation on a particular site, based on the most recent and accurate flood data and topographic information available. State flood maps, which are referred to in the FHACA rules as Department delineations, and Federal flood maps indicate both the anticipated depth of flooding in a community (that is, the flood elevation) and the approximate extent of land subject to this flooding (that is, the flood hazard area).

A person who agrees with the depth of flooding depicted on a Department delineation or a Federal flood map but who believes that the extent of flooding is not accurate, can, under a verification application, provide detailed topography of a site and propose a revised flood hazard area limit. Under N.J.A.C. 7:13-3.2(c), if the Department delineation was promulgated before January 24, 2013, a person who does not agree with the depth of flooding depicted on a Department delineation or a Federal flood map may compute the flood hazard area design flood elevation at a specific site and, under a verification application, propose that the revised flood elevation and associated flood hazard area limit be applicable to the specific site rather than the elevation and limit depicted on the Department delineation or Federal flood map. However, under N.J.A.C. 7:13-3.2(b), a person who does not agree with the depth of flooding depicted on a Department delineation promulgated on or

after January 24, 2013, cannot propose a site-specific revised flood hazard design flood elevation under a flood hazard area verification. In that circumstance, the only option under the FHACA rules to modify the flood depth on a particular site would be to apply for a revision of a Department delineation in accordance with N.J.A.C. 7:13-13.4.

Incorporation of certain FEMA maps as Department delineations (N.J.A.C. 7:13-3.3)

55. COMMENT: We support the incorporation of updated FEMA flood mapping for the Delaware River, which has experienced significant flood events in recent years. (28, 177)

RESPONSE: The Department acknowledges this comment in support of the amendments.

56. COMMENT: The State has an obligation to protect all residents of New Jersey. The Flood Hazard Area Control Act is not limited to tidal or fluvial areas. However, there are inland flood risks that are as bad as or worse than what we are seeing in the bays and the barrier islands. Nevertheless, flooding in these areas is not being addressed. Flood maps in such inland areas need to be updated as well as along the coast, otherwise the State is not equally protecting people across New Jersey as it is obligated to. (181)

RESPONSE: The Flood Hazard Area Control Act rules regulate development in all flood hazard areas and riparian zones throughout the State including both fluvial and tidal areas. The Department agrees that it is important to continually rely on the most recent and accurate

flood mapping in both tidal and fluvial areas. As noted in the response to comments 47 through 53, the amendments adopted under this rulemaking automatically incorporate revised FEMA flood mapping throughout the State. While the Department's efforts to improve flood mapping have recently been prioritized in order to facilitate recovery from Superstorm Sandy, the Department also notes that new fluvial flood mapping was recently adopted under the flood hazard area emergency rule for the Delaware River in Sussex, Warren and Hunterdon counties. This is a significant revision, since there had previously been no Department delineation of the Delaware River north of Harmony Township, Warren County.

N.J.A.C. 7:13-7.2 Permits-by-rule

57. COMMENT: We do not support the proposed permits-by-rule and advocate for stricter controls over these activities. In the adopted revisions to the Flood Hazard Area Control Act rule in 2007, the permit-by-rule allowances were expanded and now these are being further expanded. We are opposed to further weakening of restrictions on structural expansion in floodplains and riparian areas. (28, 177)

58. COMMENT: The adopted permit-by-rule might not be good because it is reducing helpful regulatory oversight and inviting people to rebuild in dangerous locations. (181)

59. COMMENT: In accordance with FEMA regulations, property owners are permitted to make temporary repairs and live in structures that are deemed substantially damaged for up to four

years before they are required to elevate the structure. These phased rules and allowances place a greater workload and burden on local construction officials to track construction and compliance reviews. Most objectionable, however, is the burden placed on local governments to monitor and enforce these provisions which are now authorized under a permit-by-rule, meaning the Department will not even be aware of the large majority of these projects. We question whether the State would expect a local government to evict a person who resides in property that does not necessarily have an imminent life safety issue. (83)

60. COMMENT: We are concerned that the permit-by-rule at N.J.A.C. 7:13-7.2(a)3 was expanded to place more responsibility on the local floodplain manager to meet State regulations and FEMA National Flood Insurance Program requirements, which represent a most complicated set of, in some cases, overlapping standards. (126)

61. COMMENT: The rule includes permits-by-rule that require the municipal construction code officials to make compliance determinations regarding NJDEP permits, since the NJDEP permit is a required "prior approval" pursuant to the UCC. This creates an additional burden on the local official and also increases the potential for non-compliance with all required permit standards. How does NJDEP intend to monitor permit compliance and inspect coastal construction to ensure that the standards of the PBR are being met? Does NJDEP have adequate resources to ensure compliance? (126)

RESPONSE TO COMMENTS 57 THROUGH 61: Amendments to the permit-by-rule at N.J.A.C. 7:13-7.2(a)3 have been adopted to facilitate reconstruction, relocation, elevation and flood-proofing of buildings that were damaged in Superstorm Sandy in accordance with FEMA requirements and New Jersey's Uniform Construction Code (UCC). Since these structures are being elevated and/or rebuilt in the same location or with only a 300 square foot expansion, there is no anticipated adverse impact to flooding or the environment. The amended permit-by-rule will, in fact, have a positive impact on flooding because the structures will be properly elevated and rebuilt in accord with the UCC. The UCC is currently implemented by local construction officials and includes the requirement to properly elevate buildings in addition to other construction requirements. Therefore, the Department does not anticipate any additional burden will be placed on construction officials as a result of this amended permit-by-rule. Compliance with this permit will be handled by the Department in the same manner as all other standards under this chapter. If a violation of the rule is reported or observed the Department will follow up with a compliance inspection and appropriate response.

62. COMMENT: We would like to thank the DEP for removing the requirement for those who have to elevate their homes to obtain a flood hazard area permit. By allowing applicants to do the required elevation work with a permit-by-rule, the DEP is helping to cut tremendous amounts of red tape for these families who already went through so much in the aftermath of Superstorm Sandy and save them the fees associated with a Flood Hazard area permit. We also thanks the DEP for allowing homeowners to begin reconstructing their property without

waiting for DEP approval of this permit so that property owners can begin to rebuild their homes as quickly as feasibly possible. (174)

RESPONSE: The Department acknowledges this comment in support of the amendments.

63. COMMENT: We support the permit-by-rule at N.J.A.C. 7:13-7.2(a)3. However, the permit-by-rule excludes repair and focuses on reconstruction alone. There should be an exemption when the work is an internal upgrade to a home that would not, in general, require a flood hazard area permit. (175)

RESPONSE: The repair of a lawfully existing structure is permitted-by-rule at N.J.A.C. 7:13-7.2(b)4. N.J.A.C. 7:13-1.2 defines "repair" to mean “to patch, mend, replace, rebuild and/or restore a lawfully existing structure to a usable condition after decay or damage has occurred, in which less than 50 percent of the structure is replaced and the size, shape or location of the structure is not altered. For habitable buildings, the percentage of replacement shall be determined by comparing the cost of the repair to the replacement market value of the building as determined before the start of construction; where the percentage of replacement is less than 50 percent, such repair shall not constitute a substantial improvement as defined in this section. For all other structures, the percentage of replacement shall be determined by comparing the area of the structure being reconstructed repaired to the total area of the structure.” Buildings that are being repaired in accordance with this definition are not required to meet the elevation standards of this rulemaking.

64. COMMENT: Structures should not be automatically allowed to expand by 300 square feet under N.J.A.C. 7:13-7.2(a)3i. Structures in floodplains and riparian zones should be discouraged and, when allowed, they should be prohibited from expanding. (28, 177)

65. COMMENT: Structures should be discouraged from being rebuilt in floodplains and riparian areas. A riparian buffer should be maintained where it does exist, not allowed to be used for relocation of any structure, no matter whether the area is poorly vegetated at the time. Allowing the footprint of structures to increase removes the availability for restoration of the natural floodplain and riparian area. (28, 177)

RESPONSE TO COMMENTS 63 AND 65: Regarding prohibiting the reconstruction of damaged buildings, the Flood Hazard Area Control Act at N.J.S.A. 58:16A-55.1 provides that "No rule or regulation . . . shall prevent the repair or rebuilding within a flood hazard area of any lawful preexisting structure which was damaged by a flood or by any other means." As such, the Department does not have the statutory authority to prevent the reconstruction of a lawfully existing private residence, or any other structure, in a flood hazard area. The Department has, however, adopted provisions in these rules, which require that reconstruction, relocation and/or elevation is undertaken responsibly and with minimal adverse impacts to flooding, or the environment. With regard to preventing the minor expansion of a lawfully existing building, the Department does not believe that it is appropriate to prevent people from adding small additions to lawfully existing structures

within flood hazard areas, provided construction is undertaken responsibly, as prescribed by this chapter, so that adverse impacts to flooding and the environment will be avoided. For this reason, N.J.A.C. 7:13-7.2(a)3vi requires that no vegetation is cleared, cut or removed in a riparian zone, except for vegetation within 20 feet of the building if such disturbance is necessary to facilitate its reconstruction, relocation and/or elevation, and N.J.A.C. 7:13-7.2(a)3vii requires that all vegetated areas temporarily disturbed within the riparian zone are replanted with indigenous, non-invasive species upon completion of the regulated activity. Thus the Department believes that the adopted permit-by-rule is appropriate.

66. COMMENT: N.J.A.C. 7:13-7.2(a)3iv provides that a building being reconstructed, relocated or elevated cannot be expanded or relocated closer to any regulated water or within a floodway. This requirement is prohibitive on a barrier island or lagoon situations where regulated waters can exist in multiple directions relative to the structure. (175)

RESPONSE: The intent of this provision is to limit expansion or relocation of a building closer to the regulated water to which the property containing the building borders. For example a house that fronts on a bay cannot expand closer to the bay under this permit-by-rule. To expand or relocate a building closer to the bay, a flood hazard area individual permit from the Department would be required.

67. COMMENT: N.J.A.C. 7:13-7.2(a)3vi should be clarified to allow removal of vegetation for a proposed addition. (175)

RESPONSE: N.J.A.C. 7:13-7.2(a)3vi provides that "no vegetation is cleared, cut or removed in a riparian zone, except for vegetation within 20 feet of the building if such disturbance is necessary to facilitate its reconstruction, relocation and/or elevation." This is intended to refer to any vegetation within 20 feet of the building in its existing and/or its proposed location and configuration. Since an expansion of 300 square feet is permitted to the footprint of the building under N.J.A.C. 7:13-7.2(a)3i, riparian zone vegetation within 20 feet of the proposed expansion may be disturbed, provided all other requirements of this permit-by-rule are satisfied.

68. COMMENT: The permit-by-rule for elevating, relocating and reconstruction has unnecessary limits on riparian zone disturbance, especially in areas where acid-producing soil deposits are found, since many such areas were impacted by Superstorm Sandy. (48)

RESPONSE: The limitations under the permit-by-rule at N.J.A.C. 7:13-7.2(a)3 were established in 2007 in order to ensure that impacts to riparian zone vegetation associated within elevating a building would be *de minimis.* This adoption expands the scope of activities covered under the permit-by-rule to include the reconstruction, relocation, and/or minor expansion of lawfully existing buildings. It has been the Department's experience that the existing limitations on disturbance to riparian zone vegetation afford sufficient area to undertake these activities in a majority of cases. In cases where disturbance to riparian zone vegetation exceeds the limitations of the permit-by-rule, the Department cannot be assured

that the impacts are *de minimis*, and therefore must perform a site-specific review of the proposed activity under a flood hazard area general permit or individual permit.

69. COMMENT: It appears that the permit-by-rule only applies to structures that were substantially damaged by flood. Clarification is required as to why a reconstruction after a casualty requires a general permit and why a voluntary reconstruction is a permit-by-rule. (83, 117)

RESPONSE: Reconstructing, elevating and/or relocating a building under the permit-by-rule at N.J.A.C. 7:13-7.2(a)3 is not limited to cases where a building has been substantially damaged.

N.J.A.C. 7:13-8.8 General permit 6

70. COMMENT: We do not support the use of general permits for reconstruction; these projects need to be carefully evaluated on a case by case basis and not allowed to meet the broad requirements of a general permit. This is not acceptable for the reconstruction of flood damaged structures in the floodplain and in riparian areas. The substantial damages and risks posed by such structures require rigorous oversight. (28, 177)

RESPONSE: Unlike permits-by-rule, general permits require a submission of an application to the Department to ensure that the activity meets the requirements of the permit. With this

rulemaking the Department adopted amendments to existing general permit 6, which allows for the reconstruction of a damaged or destroyed residence, in order to establish amended standards regarding the construction and use of enclosures beneath the lowest floor of the building. As noted in the response to comments 64 and 65, the Flood Hazard Area Control Act at N.J.S.A. 58:16A-55.1 prohibits the Department from preventing the reconstruction of a lawfully structure in a flood hazard area that has been damaged by flooding or other means. The Department has, however, adopted provisions in this general permit, which require that reconstruction, relocation and/or elevation is undertaken responsibly and with minimal adverse impacts to flooding, or the environment. Furthermore N.J.A.C. 7:13-8.2 allows the Department, in addition to the conditions that apply to all general permit authorizations under N.J.A.C. 7:13-8.2(b), to establish conditions in a general permit, as required on a case-by-case basis, to assure compliance with all applicable requirements of this chapter and its enabling statutes.

71. COMMENT: We oppose the expansion to the period of time allowed for the reconstruction of a structure under General Permit 6 from one to five years. This is simply too long of a period, and leaves structures unattended and vulnerable to more storm damage as well as vandalism, and poses significant adverse community impacts. The term should remain one year. (28, 177)

RESPONSE: N.J.A.C. 7:13-8.8 sets forth a general permit that authorizes the reconstruction of a lawfully existing private residence that has been damaged or destroyed by fire, flood or

other natural disaster, provided certain conditions are met. Previous to this adoption, N.J.A.C. 7:13-8.8(b)1 required that an application be made under this general permit within one year after the residence has been damaged or destroyed by fire, flood or other natural disaster. However, it has been the Department's experience that the one-year period in which to make the application to the Department to reconstruct a damaged or destroyed private residence is difficult to comply with due to a number of unavoidable social and economic factors. This is particularly the case considering the number of private residences that were damaged or destroyed during Superstorm Sandy and the difficulty many families are experiencing. The Department is therefore extending the timeframe under which an application can be made under this general permit to within five years of the damage or destruction of the private residence.

72. COMMENT: We appreciate the increased eligibility for the reconstruction of a lawfully existing private residence under general permit 6 due to the expansion of time when the residence had been damaged by fire, flood or other natural disaster from one year to five years. (175)

RESPONSE: The Department acknowledges this comment in support of the amendments.

7:13-9.2 Application requirements for an individual permit

73. COMMENT: The requirement for applicants to provide structural engineering calculations to demonstrate code compliance and flood resiliency should be eliminated from N.J.A.C. 7:13-9.2(e). These calculations are a prerequisite for local building permits, and the dual review presents opportunities for conflict. (142)

RESPONSE: The Flood Hazard Area Control Act rules do not in most cases require the submittal and review of structural engineering calculations. In the few instances where the submittal of such calculations is required, such as to obtain an individual permit for a flood-proofed building, the Department has determined that a review of such calculations is essential in order to ensure compliance with the requirements of this chapter.

N.J.A.C. 7:13-11.5 Requirements for a building

74. COMMENT: Despite being an integral designation in the NFIP, the term "V-Zone" or similar wording does not appear at all in this rulemaking. The Department should clarify whether or not the rule applies to the V-Zone foundation construction and location standards, such as the requirement of the Uniform Construction Code and FEMA that the lowest horizontal structural member of a building must be at or above the Base Flood Elevation. (126)

RESPONSE: It is not necessary for the Flood Hazard Area Control Act rules to include the term "V-Zone" or to establish V-Zone construction standards. Specific construction

requirements for all buildings in New Jersey, including buildings located in flood hazard areas and Zone V, are set forth in the Uniform Construction Code at N.J.A.C. 5:23, which is promulgated by the New Jersey Department of Community Affair's and administered locally though building code officials. Therefore, there is no need for N.J.A.C. 7:13 to establish requirements with regard to FEMA zone designations. Rather, the Flood Hazard Area Control Act rules set forth the elevation that buildings in flood hazard areas must be constructed to, based on the design flood elevation as determined from State or FEMA flood mapping, or as calculated by an applicant.

75. COMMENT: In several places under N.J.A.C. 7:13-11.5, the Department will permit the lowest floor of a building to be constructed below the general elevation standard of one foot above the flood hazard area design flood elevation, or in some cases a building can be flood-proofed in lieu of elevating, provided the "applicant demonstrates that it is not feasible" to elevate, or the lowest floor is elevated "as close as feasible" to one foot above the flood hazard area design flood elevation. This language is too vague and undefinable and leads to problems between the applicant and the NJDEP on interpreting what is feasible. The rule should specifically say in these instances that the architect or engineer should certify that the rule provisions cannot be met either for engineering reasons or because the proposed development is in an urban setting where the development needs to fit into the neighborhood character and connect to local roads and sidewalks. (36, 90)

76. COMMENT: The Department should develop guidelines as to what constitutes an economic hardship to assist prospective applicants who cannot elevate their building to the standards required in the rules, and allow people to assume individual risk given the value of the building, personal income, the cost of flood insurance and potential flood risk. (48)

RESPONSE TO COMMENTS 75 AND 76: The terms described by the commenter are found in many places throughout N.J.A.C. 7:13 and are intended to provide appropriate flexibility in cases where compliance with a specific requirement is not feasible in a variety of circumstances. Under the adopted amendments, such flexibility is provided in cases where the "applicant demonstrates that it is not feasible" to elevate the lowest floor of a building one foot above the flood hazard area design flood elevation under N.J.A.C. 7:13-11.5(g)3 and (g)4. This term is also used in cases where the "applicant demonstrates that it is not feasible" to dry flood-proof a building as required by N.J.A.C. 7:13-11.5(q). The adopted amendments also require that the lowest floor of certain non-residential buildings be set "as close as feasible" to one foot above the flood hazard area design flood elevation. This continues the flexibility provided for habitable buildings that are neither a private residence or a public building at N.J.A.C. 7:13-11.5(i)2ii previous to the adopted amendments, which required applicants to construct the lowest floor of the building "as close to one foot above the flood hazard area design flood elevation as feasible." It has been the Department's experience that a variety of practical, topographic, economic, and site-specific factors relate to the feasibility of achieving compliance with these and certain other requirements throughout the Flood Hazard Area Control Act rules. Therefore, when these types of terms are inserted into

regulations they are done so to allow applicants and the Department to take into consideration unique circumstances that may exist for an applicant on a particular property for a specific type of activity. They are meant to add flexibility under limited circumstance. These terms are interpreted based on the underlying intent of the provision, the specific circumstance in which they are being analyzed against as well as court rulings on the issue at hand. It has been the Department's experience that it is too difficult to articulate every variation that may occur per applicant, activity and site condition to provide technical guidance on these terms.

Regarding the commenter's request that the Department allow people to assume individual risk given a number of personal factors rather than conform to the elevation standards set forth in this rulemaking, the Department has developed the standards in this chapter in order to fulfill its broad statutory mandate to minimize the adverse impacts of flooding on the residents and property of this State, and cannot therefore apply differing standards based on personal economics or willingness to assume risk. Flooding impacts communities as well as individuals. Allowing one person or property to assume an undue flood risk places a potential burden on the whole community.

77. COMMENT: The rule should eliminate the requirement for applicants to seek a hardship exception for submersible utilities such as transformers that lie beneath the floodplain elevation. Such activities should be considered a "by right" improvement. (142)

RESPONSE: The placement of structures in flood hazard areas is regulated under N.J.A.C. 7:13-2.4 and therefore requires a flood hazard area permit. The Flood Hazard Area Control Act rules contain various requirements for structures such as limitations on flood storage displacement, requirements intended to ensure the safety and integrity of structures, and, in the case of habitable buildings, the elevation of the lowest floor. However, the Flood Hazard Area Control Act rules do not set forth specific requirements for submersible utilities such as transformers that lie beneath flood elevations. Furthermore, non-habitable buildings, such as utility buildings, are not subject to the elevation requirements of N.J.A.C. 7:13. It is therefore not clear to the Department why the placement of submersible utilities would require an applicant to seek a hardship exception.

78. COMMENT: The Department should amend the rule upon adoption to include "multi-residence buildings" in the provisions at N.J.A.C. 7:13-11.5(g)4, along with commercial buildings, houses of worship, office complexes and shopping centers. (79)

RESPONSE: N.J.A.C. 7:13-1.2 defines a "multi-residence" building as any building intended to provide three or more units of temporary or permanent residence for humans. Examples of a multi-residence building include an apartment building, condominium complex, townhouse complex, hotel, motel and any mixed-use building that contains three or more units of temporary or permanent residence. N.J.A.C. 7:13-11.5(g)3 requires that the lowest floor of multi-residence buildings must be set at least one foot above the flood hazard area design flood elevation, except as provided at N.J.A.C. 7:13-11.5(g)3i through (g)3v. Specifically, in

cases where a multi-residence building contains mixed residential and non-residential use, such as a building with retail on the first floor and residential space on higher floors, the non-residential portions of the building can be flood-proofed in accordance with N.J.A.C. 7:13-11.5(q) if elevating those portions of the building is unachievable. However, it is necessary for the residential portions of the building to be properly elevated in order to protect the residents from the deleterious impacts of flooding. N.J.A.C. 7:13-11.5(g)4 applies to a variety of non-residential buildings, such as a commercial business, house of worship, office complex or shopping center. Like the non-residential portions of a mixed use multi-residence building, the lowest floor of these buildings are required to be properly elevated or, if elevating proves to be infeasible, then these buildings can be flood-proofed in accordance with N.J.A.C. 7:13-11.5(q).

By requesting that the Department amend N.J.A.C. 7:13-11.5(g) to allow multi-residence buildings to meet the same elevation standards as non residential buildings, the commenter is requesting that the Department allow residential buildings to be flood-proofed. However, it has been the Department's experience that flood-proofing residential buildings is not appropriate, as it places people in a significant amount of risk. People are not as likely to be present in a retail store or office building during a flood event than they are to be in their home or apartment, or in a hotel. It is therefore imperative that residential space be properly elevated so as to reduce the risk of loss of life or property during a flood.

It is possible that the commenter believes that all buildings in flood hazard areas are required to be elevated, or that, in light of FEMA's ABFEs, buildings that are not properly elevated will be subject to future increases in flood insurance premiums. As discussed in the

response to comments 7 and 8, the Flood Hazard Area Control Act rules require only new, reconstructed and substantially damaged buildings to be elevated. Buildings that have not been substantially damaged are not in any case required to be elevated. Furthermore, regarding potential impacts related to increased flood insurance rates, these rates are set by FEMA through the National Flood Insurance Program and are not in any way influenced by this rulemaking. However, buildings elevated in accordance with the Flood Hazard Area Control Act rules will enjoy significantly reduced insurance premiums as compared with buildings that are not so elevated.

79. COMMENT: The rulemaking does not appear to allow retail in a V-Zone below the ABFE. Please clarify that an enclosure below the lowest floor of a building, which is used for parking, storage & access, is not limited to private residences, and can apply to commercial garages. (79)

80. COMMENT: The rule should eliminate the prohibition against multi-family development in V-Zones. (142)

RESPONSE TO COMMENTS 79 AND 80: The Flood Hazard Area Control Act rules do not establish requirements or any restrictions with regard to FEMA zone designations and therefore do not define, refer to, or prevent V-Zone construction. Furthermore, specific construction requirements for all buildings in New Jersey, including buildings located in flood hazard areas and Zone V, are set forth in the Uniform Construction Code at N.J.A.C.

5:23, which is promulgated by the New Jersey Department of Community Affair's and administered locally though building code officials.

N.J.A.C. 7:13-11.5(n) sets forth the requirements for an enclosure below the lowest floor of any habitable building, and limits the use of such an enclosure vehicle parking, building access and storage. N.J.A.C. 7:13-11.5(n) therefore permits the construction of a commercial garage below the lowest floor of a habitable building. N.J.A.C. 7:13-11.5(o) establishes additional requirements if such an enclosure is intended for use as a garage that serves a private residence. Therefore, the limitations and requirements at N.J.A.C. 7:13-11.5(o) do not apply to commercial garages.

81. COMMENT: Please define the term "permanent flood openings" as used in N.J.A.C. 7:13-11.5(n)3. This term is not defined or used within the Uniform Construction Code as referenced in this paragraph. Please clarify what happens to the use of flood vents as permitted at N.J.A.C. 7:13-11.5(p) previous to this adoption. Do flood vents qualify as "permanent flood openings?" If not, please incorporate a definition for the term "flood vents" and add language indicating where the use of flood vents is permissible. (164)

RESPONSE: N.J.A.C. 7:13-11.5(n) sets forth requirements to enclose an area that lies below the lowest floor of a habitable building. Such an enclosure must have "permanent flood openings" under N.J.A.C. 7:13-11.5(n)3 in order to balance hydrostatic pressure on the building and resist displacement and buoyancy during a flood. Flood vents are considered a type permanent flood opening, and therefore meet the requirements of N.J.A.C. 7:13-

11.5(n)3, provided the flood vents are designed and constructed in accordance with the requirements of the Uniform Construction Code. The use of flood vents under previously approved flood hazard area permits is not affected by this rulemaking.

82. COMMENT: N.J.A.C. 7:13-11.5(n) and (o) are unclear and confusing. N.J.A.C. 7:13-11.5(n) states the Department will approve an individual permit to “enclose an area” below the finished habitable floor provided it is used "solely for the parking of vehicles". Is this provision intended for existing homes to which a new enclosure below the finished floor is proposed? Also, what is the difference between enclosing an area for parking vehicles and creating a garage? Definitions of these terms would be helpful. (49)

RESPONSE: The standards at N.J.A.C. 7:13-11.5(n) and (o) apply to new construction as well as any building that has been substantially damaged and/or is being elevated. No distinction is intended between “parking of vehicles” under N.J.A.C. 7:13-11.5(n) and “garage” under N.J.A.C. 7:13-11.5(o) other than that subsection (n) sets forth general standards for any enclosure proposed below the lowest floor of any building and subsection (o) sets forth addition standards for an enclosure that is intended to be used as a garage for a private residence. For example, whereas an enclosure below the lowest floor of a commercial building, which will be used as a garage, is subject only to the requirements of N.J.A.C. 7:13-11.5(n), a garage below the lowest floor of a private residence is subject to the requirements of both N.J.A.C. 7:13-11.5(n) and (o). The requirements at N.J.A.C. 7:13-11.5(n) are necessary to ensure that any such enclosure will not be used for habitation, will have positive

drainage, will not be a basement (since basements are prohibited under the National Flood Insurance Program) and will have flood vents that equalize hydrostatic pressure on the exterior walls of the building. The additional requirements for garages serving a private residence under N.J.A.C. 7:13-11.5(o) are necessary to ensure the safety of the residents using the garage. Finally, since the terms noted by the commenter are used in their normally accepted meaning and context, definitions are not necessary.

83. COMMENT: The reconstruction of a building requires the lowest floor to be situated one foot above the BFE and all areas below the BFE to remain open for floodwaters in accordance with N.J.A.C. 7:13-11.5(n), (o) and (p). However, N.J.A.C. 7:13-11.5(n) limits the footprint of a garage to 625 square feet. Since many homes have a footprint of greater than 625 square feet, can the remaining area be enclosed for unfinished storage? The commenter also understands that FEMA permits a maximum garage size of 300 square feet. If so, there is an inconsistency with the permit-by-rule. (83)

RESPONSE: Amended N.J.A.C. 7:13-11.5 does not limit the footprint or height of an enclosure beneath the lowest floor of a building. The previous limitation of 625 square feet for a garage under N.J.A.C. 7:13-11.5(n)3 was deleted with the adoption of emergency flood hazard area regulations on January 24, 2013, and therefore no longer applies. Under existing N.J.A.C. 7:13, a person can build a garage of any size provided that the requirements of N.J.A.C. 7:13-11.5(n), (o), and (p) are satisfied. The Department is not aware of limitations that FEMA might impose on the footprint of a garage.

84. COMMENT: N.J.A.C. 7:13-11.5(o) authorizes approval "for an enclosure" that is intended to be a garage only on lots created prior to November 5, 2007. Is this section intended for construction of new homes only? (49)

RESPONSE: The requirements of N.J.A.C. 7:13-11.5(o) are intended for buildings that are being reconstructed, buildings that are substantially damaged, buildings that are being elevated and new buildings that are being constructed.

85. COMMENT: If a proposed lot conforms with local zoning or receives an approved variance, why does N.J.A.C. 7:13-11.5(o)3 prevent garages on lots created after November 5, 2007? Flood insurance coverage specifically exempts self-propelled vehicles such as cars from coverage, so permitting garages does not automatically result in greater flood insurance claims. If appropriate flood vents and other measures are incorporated to stabilize hydrostatic pressure, and the deed is modified to prohibit habitation, it is not clear why garages are prohibited. Prohibiting garages on newly created conforming single family lots significantly reduces the marketability of the lots and would constitute a regulatory taking. The proposed prohibition of garages on newly created lots forces the reconstruction of larger homes on existing lots, regardless of whether or not the lot is conforming. Single family homes are permitted under a CAFRA general permit which does not require compliance with any coverage limitations contained at N.J.A.C. 7:7E-5. The prohibition of garages does not result in less barrier island development but rather, could result in more intense development on

existing lots. The proposed rules forces redevelopment of existing (potentially smaller) lots rather than creation of new (potentially larger and less dense) conforming lots. (49)

86. COMMENT: We are concerned that N.J.A.C. 7:13-11.5(o) provides that an individual permit for an enclosed area used as a garage for one private residence is not available for lots granted preliminary or final subdivision approval after November 5, 2007. (175)

RESPONSE TO COMMENTS 85 AND 86: It is the Department's intention that people who live in or near flood hazard areas be reasonably protected from the deleterious impacts of flooding. For this reason, N.J.A.C. 7:13-11.5 sets forth standards related to the construction of buildings in flood hazard areas and N.J.A.C. 7:13-11.6 sets forth standards related to the construction of railroads, roadways and parking areas in flood hazard areas. Both of these sections are intended to ensure that private residences and attendant garages are afforded adequate flood protection and, where possible, safe access to and from dry land during a flood event. These sections also reflect the Department's recognition that compliance with these requirements is not always feasible when one private residence is being constructed. For example, N.J.A.C. 7:13-11.6(f) sets forth standards for safe access to homes built as part of a residential subdivision, which are more stringent than the standards for the construction of one driveway serving one private residence at N.J.A.C. 7:13-11.6(c). In the case of a residential subdivision, where multiple houses are being built within one development and which rely on a common roadway system, developers generally have more flexibility to grade properties within flood hazard areas in such a way as to elevate all or many of the

homes, garages and driveways above the design flood elevation. But for the construction of one private residence, or a garage that serves a private residence, it has been the Department's experience that applicants often do not have sufficient room to alter topography and/or reconstruct existing driveways in order to accommodate a garage that has a floor elevation above the design flood elevation. Therefore, N.J.A.C. 7:13-11.5 and 11.6 incorporate appropriate flexibility when one private residence is being constructed.

Given the above, previous N.J.A.C. 7:13-11.5(n)2, adopted on November 5, 2007, required that a garage being constructed below the design flood elevation must serve "only one private residence, which is not being constructed as part of a larger residential subdivision." This requirement was recodified with clarifying amendments at N.J.A.C. 7:13-11.5(o)2. Any property in a flood hazard area that was subdivided subsequent to November 5, 2007, was therefore subject to previous N.J.A.C. 7:13-11.5(n)2. As such, N.J.A.C. 7:13-11.5(o)3 provides that an enclosure below the flood hazard area design flood elevation, which is intended to be used as a garage for one private residence, cannot be constructed on a lot that received preliminary or final subdivision approval after the adoption date of the existing chapter on November 5, 2007. It has been the Department's experience that people sometimes subdivide a lot, and either construct a private residence, one lot at a time, on each of the newly subdivided lots, or else sell off the lots to separate individuals, who independently construct a private residence on each of the newly subdivided lots. In this way, individuals are able to circumvent the more stringent requirements of this chapter that apply to residential subdivisions. Therefore, if the garage is being constructed on a lot that received preliminary or final subdivision approval after the adoption date of the existing chapter, it

does not qualify for N.J.A.C. 7:13-11.5(o), and must instead meet the requirements at N.J.A.C. 7:13-11.5(h).

It is not clear how a prohibition on the construction of a residential garage below the flood hazard area design flood elevation on a lot created after November 5, 2007, will result in the construction of larger homes or would constitute a regulatory taking, as suggested by one of the commenters. The requirements of N.J.A.C. 7:13-11.5(o) apply only to garages that lie below the flood hazard area design flood elevation and are intended to ensure the safety of residents using such garages. N.J.A.C. 7:13 does not contain any specific requirements or prohibitions regarding the construction of garages that lie above the flood hazard area design flood elevation, and therefore should not affect the size of development. It is additionally unclear as to the significance of the commenter's reference to CAFRA general permits, since the requirements of N.J.A.C. 7:13 apply to all coastal general permits that include buildings, and individual permits, where activities are proposed in a flood hazard area.

87. COMMENT: New N.J.A.C. 7:13-11.5(m), which replaces N.J.A.C. 7:13-11.5(j)2, requires the applicant to demonstrate that a new or converted public building or multi-residence building is served by at least one roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation, where feasible. While the Department's concern that evacuation routes be available is appreciated, the necessity for a one foot above the FHA design flood elevation does not seem justified. Also, it may be impossible to get roadways in at the higher elevations, especially in urban areas in need of redevelopment and where access is possible if a road is slightly flooded and therefore not a

significant impediment to public safety. The Department should retain the existing "where feasible" from N.J.A.C. 7:13-11.5(j) for conversions and remove the prior restriction at N.J.A.C. 7:13-11.5(h) for construction and reconstruction for new subsection N.J.A.C. 7:13-11.5(m)1 as it relates to the roadway being "constructed at least one foot above the flood hazard area design flood elevation" in fluvial flood hazard areas. Language similar to N.J.A.C. 7:13-11.5 (h)3 and (j)2 is proposed in N.J.A.C. 7:13-11.5(m)2 regarding tidal flood hazard areas. (175)

RESPONSE: Adopted N.J.A.C. 7:13-11.5(m) incorporates with amendments requirements found at N.J.A.C. 7:13-11.5(h)2, (h)3 and (j)2 previous to this rulemaking. N.J.A.C. 7:13-11.5(h)2 required an applicant to demonstrate that a new public building in a fluvial flood hazard area is served by at least one roadway, the travel surface of which lies at least one foot above the flood hazard area design flood elevation. N.J.A.C. 7:13-11.5(h)2 required an applicant to demonstrate that a new public building in a tidal flood hazard area, as well as any reconstructed public building, is served by at least one roadway, the travel surface of which lies at least one foot above the flood hazard area design flood elevation. N.J.A.C. 7:13-11.5(j)2 required an applicant to demonstrate that, for the conversion of a building into a private residence or public building, the building is served by at least one roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation, where feasible. Adopted N.J.A.C. 7:13-11.5(m) consolidates these requirements, incorporates the newly defined term "multi-residence building" and applies the same requirements for a newly constructed building and a converted building. Specifically,

adopted N.J.A.C. 7:13-11.5(m)1 requires that any such building in fluvial areas must possess at least one existing or proposed roadway, the travel surface of which is constructed at least one foot above the flood hazard area design flood elevation. Adopted N.J.A.C. 7:13-11.5(m)2 furthermore continues the flexibility for buildings in tidal flood hazard areas. Tidal flooding is often widespread and may inundate entire communities. It may therefore not be possible to create a roadway above the flood hazard area elevation in a tidal area. Public buildings include such structures as police stations, hospitals, schools and other buildings where a large number of people gather, to which access is critical to maintain during a flood event. "Multi-residence buildings" are included at N.J.A.C. 7:13-11.5(m) as these are a subset of the previous definition of "public building." The Department believes that the requirement to provide elevated access to a public building, and the newly adopted subset of multi-residence building, is essential in order to preserve the safety of those utilizing such buildings and relying on safe access to and from these buildings. Furthermore, in cases where a building is converted to a public building or a multi-residence building, the Department believes that the same standards should apply as to the construction of a new building of these types, since the potential flood risk to people using a newly constructed building or a newly-convert building is the same. In cases where access one foot above the flood hazard area design flood elevation is not feasible, an applicant may seek relief from strict compliance from this requirement at N.J.A.C. 7:13-9.8.

88. COMMENT: N.J.A.C. 7:13-11.5(n)2 provides that an individual permit would be issued to "enclose an area that lies below the lowest floor of a habitable building" where "the floor of

the enclosure is situated at or above the adjoining exterior grade along at least one entire exterior wall, in order to provide positive drainage of the enclosed area." It is unclear why positive drainage is needed through an entire exterior wall, rather than through only a portion using engineering solutions. (175)

RESPONSE: The requirements of N.J.A.C. 7:13-11.5(n)2 are necessary to ensure that any enclosed area beneath the lowest floor of a building is not a basement as defined by the National Flood Insurance Program. Such enclosures are highly hazardous in flood hazard areas. Floodwaters along many of New Jersey's streams and rivers can rise unexpectedly and capture occupants unaware. For example, people have been trapped within flooded basements, resulting in severe trauma and loss of life. This is especially a concern for solitary and non-ambulatory individuals, who must often rely on emergency response teams to extract them from flooded buildings. Basements also become filled with floodwaters and do not have positive drainage to allow trapped floodwaters to discharge, which leads to increased flood damage and prolonged recovery.

89. COMMENT: Despite some accompanying restrictions, N.J.A.C. 7:13-11.5(p) is positive, as it allows for more options to raise a home. (175)

90. COMMENT: N.J.A.C. 7:13-11.5(s) is a positive and common-sense amendment. The provision of a new individual permit to wet-proof a building so that it is "flood resistant", provided that "floodwaters can enter the building through permanent openings, while not

damaging the structural integrity of the building" is strongly supported as it would be extremely beneficial in urbanized areas, such as Hoboken, and supports redevelopment projects. (175)

91. COMMENT: The use of wet flood-proofing and dry flood-proofing for building protection is supported. These techniques are necessary to balance the economic burden of development and redevelopment in floodplains against the cost of elevating buildings to above the design elevations. This is especially important in urban settings where elevated buildings are not compatible with adjacent neighborhood settings, local roadways and sidewalks. (36, 90)

92. COMMENT: The introduction of wet flood-proofing, which will facilitate safe and responsible development along the Hudson waterfront is supported. (48)

93. COMMENT: The allowance of flood-proofing for retrofitting non-residential structures is supported. However, the building's owner must be aware that flood-proofing a structure may not relieve the burden of increased flood insurance. (126)

RESPONSE TO COMMENTS 89 THROUGH 93: The Department acknowledges these comments in support of the amendments. Regarding the flood insurance implications of flood-proofing, the Department intends to alert applicants of the potential for increased flood insurance rates in cases where the Department grants an individual permit for a flood-proofed building.

94. COMMENT: The International Building Code, International Residential Code and FEMA's Coastal Construction Guidelines permit the use of breakaway walls beneath the lowest floor of elevated homes within FEMA's V-Zone. However, as N.J.A.C. 7:13 does not discuss them, please clarify the Department's position on the use of breakaway walls. (164)

95. COMMENT: Garages should be allowed with the same type of walls as currently allowed and not breakaway walls. One commenter indicated clarification is needed as to the allowance of breakaway wall construction below the lowest habitable floor. (65, 116)

96. COMMENT: Are breakaway walls permitted beneath the lowest floor of a building? (83)

RESPONSE TO COMMENTS 94 THROUGH 96: Breakaway walls are listed as a type of wet flood-proofing under the adopted definition of "flood-proofing" at N.J.A.C. 7:13-1.2. An area beneath the lowest floor of a building can be enclosed using breakaway walls provided the requirements of N.J.A.C. 7:13-11.5(n), (o), and (p) are satisfied. Note, however, that under the National Flood Insurance Program, an area enclosed with breakaway walls may be considered the lowest floor of a building for flood insurance purposes, and therefore may result in considerable increases in flood insurance premiums. The Department recommends that a person considering the use of breakaway walls should consult with his or her municipal floodplain administrator and flood insurance agent.

97. COMMENT: FEMA through its National Flood Insurance Program does not allow dry or wet flood-proofing of non-residential buildings in a V-Zone as is permitted by N.J.A.C. 7:13-11.5(q) through (t). In order to achieve compliance with NFIP standards, the Department should not permit flood-proofing under this rulemaking.(64)

RESPONSE: As noted in the response to comment 23, the Department recognizes benefits afforded to communities that comply with National Flood Insurance Program standards. However, the Department did not, as part of this rulemaking, intend to compare the requirements of the Flood Hazard Area Control Act rules with the NFIP or attempt to fully achieve compliance with its standards. The purpose of this rulemaking is to facilitate the safe, efficient and sustainable recovery of the New Jersey's eastern waterfront, which withstood unprecedented damage from Superstorm Sandy.

Adopted N.J.A.C. 7:13-11.5(q) through (t) set forth requirements related to flood-proofing buildings, and incorporate and expand the requirements previously at N.J.A.C. 7:13-11.5(q). Flood-proofing refers to structural measures applied to a building in order to prevent or resist flood damage to the building itself as well as its contents. There are two types of flood-proofing: dry flood-proofing, which refers to measures that are intended to prevent floodwaters from entering a building, and wet flood-proofing, which refers to measures that allow floodwaters to enter a building. The weight of floodwaters pressing against the exterior walls of a building creates a force referred to as hydrostatic pressure. This pressure can collapse walls and/or dislodge a building from its foundation, in which case the building is laterally displaced or becomes buoyant during a flood event. In many cases, hydrostatic

pressure can severely damage or destroy a building and its contents, and can pose significant safety risks for occupants who may become stranded inside a building during a flood. Dry flood-proofing seeks to resist hydrostatic pressure by structurally reinforcing a building's foundation, walls, doors and windows, so that the building will not be displaced or damaged during a flood.

The difficulty and expense of dry flood-proofing a building increases with the depth of floodwaters pressing against the building. Whereas it may be practical to dry flood-proof a building with a lowest floor of one or two feet below the design flood elevation, dry flood-proofing a building that, for example, lies eight or ten feet below the design flood elevation will likely be cost-prohibitive and perhaps even impossible given the necessary structural reinforcement. Wet flood-proofing allows floodwaters to enter a building, such that floodwaters inside the building reach the same elevation as floodwaters outside the building. While this does not protect the contents of the building, and can cause damage to drywall and insulation, it reduces or eliminates hydrostatic pressure on the exterior walls, and generally avoids lateral displacement and buoyancy during a flood event.

Where development occurs within flood hazard areas, N.J.A.C. 7:13-11.5 seeks to minimize and eliminate flood damage and associated risk to occupants. For these reasons, N.J.A.C. 7:13-11.5(g) requires that all new residential space must be properly elevated above the flood hazard area design flood elevation and N.J.A.C. 7:13-11.5(t) provides that the Department shall not issue an individual permit to flood-proof a new private residence, a new public building, or any residential portions of a new multi-residence building. However, the Department recognizes that it may not be feasible to construct, reconstruct, elevate or modify

a non-residential building such that its lowest floor is properly elevated above anticipated flood elevations. For example, a non-residential building such as a retail store may be situated on a small lot or close to a street that lies below the flood hazard area design flood elevation, and, if the lowest floor of the building is constructed one foot above the flood hazard area design flood elevation as required at N.J.A.C. 7:13-11.5(g), it may simply not be feasible to construct suitable or barrier-free access to the building. Another example is a drive-through window at a bank or restaurant, which must be constructed in close proximity to the elevation of the pavement so that employees serving at the window can properly interact with drivers. If the bank or restaurant is situated on a small lot that lies several feet below the flood hazard area design flood elevation, it may be possible to somewhat elevate the main portion of the building, but it may not be feasible to similarly elevate the portion dedicated to serving the drive-through window. In such cases, dry flood-proofing generally offers the best protection against flooding, since water is not permitted to enter the structure. However, as noted above, dry flood-proofing can be cost-prohibitive as well as physically impractical to undertake. The Department is therefore allowing wet flood-proofing for non-residential buildings in situations where dry flood-proofing is not practical, as set forth at new N.J.A.C. 7:13-11.5(q), (r) and (s).

98. COMMENT: The rule should explicitly allow the use of portable/temporary barriers as acceptable dry-proofing measures. (142)

RESPONSE: The Flood Hazard Area Control Act rules do not regulate the use of portable or temporary barriers.

N.J.A.C. 7:13-11.6 Requirements for a railroad, roadway or parking area

99. COMMENT: The emergency rule should promote the continued use of existing street infrastructure in State Planning Areas 1 and 2 by permitting developers to reuse such streets without the need to demonstrate that raising street grades at least one foot above Base Flood Design Elevation is not feasible. (75)

100. COMMENT: The rule should eliminate the requirement for applicants to seek a hardship exemption for dry-proofed, below-grade parking, as well as for access and parking on a site that is located in a qualifying urban municipality that has existing perimeter streets that are beneath the floodplain elevation. Although hardship exceptions are generally granted, the uncertainty associated with the exception presents financing challenges and permitting delays, and requires that applicants develop substantially complete architectural and engineering plans prior to assurance that approvals will be issued. (142)

RESPONSE TO COMMENTS 99 AND 100: As noted in the response to comment 87, N.J.A.C. 7:13-11.5 provides that the Department can issue an individual permit to construct or convert certain buildings only if the building is served by a roadway that lies at least one foot above the flood hazard area design flood elevation. N.J.A.C. 7:13-11.6 sets similar

standards for roadways and parking areas that serve certain uses. Also, as noted in the response to comment 88, enclosures that lie below grade can present significant safety issues for the individuals who use them. These requirements for roadways, parking areas and belowground enclosures are necessary to maintain public health, safety and welfare, and to minimize the adverse social and economic impacts of flooding on the residents of New Jersey. The Department does, however, recognize that elevating existing roadways is not always feasible, and that parking cannot always be provided above the flood hazard area design flood elevation. Flexibility is provided in N.J.A.C. 7:13-11.5 and 11.6 for many such cases. In cases where flexibility is not available, an applicant can seek relief from strict compliance from the Department's elevation standards under the hardship exception requirements in the Flood Hazard Area Control Act rules at N.J.A.C. 7:13-9.8. This provides applicants with an opportunity to present site-specific issues to the Department for consideration.

Economic Impact

101. COMMENT: The economic impact statement fails to adequately define the full scope of economic impacts that will result from final adoption, in that it does not include any detailed analysis regarding the deleterious economic impact of prohibiting residential development in the proposed V Zone of Hudson County and the cost to comply with the new standards of the Flood Hazard Area Control Act rules regarding Special Flood Hazard Areas and elevation requirements. (75)

102. COMMENT: The proposal states that the amendments will have an overall positive economic impact because they will reduce the long term economic cost from flood damage and will result in lower flood insurance premiums. There will, however, be a short term economic impact due to increased initial costs of construction to meet the new standards. Furthermore, the Biggert-Waters Flood Insurance Reform Act of 2012 will likely increase flood insurance premiums significantly above their current level. Therefore, a negative economic impact is likely to be realized. (83, 117)

103. COMMENT: The economic impact statement of the proposal does not fully address the impacts resulting from the Department's incorporation of FEMA's ABFEs. The Department's action will greatly and unnecessarily increase the cost of compliance, resulting in lower property values and higher taxes. In fact limited financial detail is presented in support of the claims of an economic benefit, and no time frames are presented. While there may be a savings over 20 or 30 years, the short term economic impacts are devastating and will result in property abandonment. No such impacts are stated in the rulemaking. The adoption of the ABFE maps is an economic disaster not quantified. This need to be weighed against the benefits stated. (61)

RESPONSE TO COMMENTS 101 THROUGH 103: The Department recognizes the extreme economic impact that many people have sustained as a result of Superstorm Sandy. It is not the Department's intention to weigh down overwhelmed people and communities

with additional regulatory burdens. The purpose of this rulemaking is simply to facilitate the safe, efficient and sustainable recovery of the New Jersey's eastern waterfront, which withstood unprecedented damage from Superstorm Sandy. The Department believes that requiring new, reconstructed and substantially damaged buildings to be elevated using the best available flood mapping will, in the long term, minimize flood damage potential and its attendant adverse economic and social impacts, and lower future flood insurance rates. However, it is not possible for the Department to estimate the economic benefit that will be realized over the coming decades as a result of this rulemaking.

Regarding V-Zone construction, the Flood Hazard Area Control Act rules do not establish requirements or any restrictions with regard to FEMA zone designations and therefore do not define, refer to, or prevent V-Zone construction. However, as noted in the response to comment 74, the Department's Coastal Zone Management rules at N.J.A.C. 7:7E-3.18 contain specific standards regarding development in V-Zones. And, as noted in the response to comments 2 through 5, FEMA's ABFEs simply approximate V-Zone locations at this time.

Furthermore, regarding potential impacts related to increased flood insurance rates, these rates are set by FEMA through the National Flood Insurance Program and are not in any way influenced by this rulemaking. And, as discussed in the response to comments 7 and 8, the Flood Hazard Area Control Act rules require only new, reconstructed and substantially damaged buildings to be elevated. Buildings that have not been substantially damaged are not in any case required to be elevated. However, buildings elevated in accordance with the

Flood Hazard Area Control Act rules may enjoy significantly reduced insurance premiums as compared with buildings that are not so elevated.

Housing Affordability Analysis

104. COMMENT: Coastal towns are required to have affordable housing, which would be impossible to provide if houses are subject to the kind of renovation costs required by these amendments. (64)

RESPONSE: The Department believes that all residential space in flood hazard areas should, to the extent possible, be constructed to be flood-resistant and protective of their occupants. The Flood Hazard Area Control Act rules therefore establish standards to ensure that new, reconstructed and improved residences are suitably elevated above flood elevations. It is possible that the commenter believes that all buildings in flood hazard areas are required to be elevated, or that, in light of FEMA's ABFEs, buildings that are not properly elevated will be subject to future increases in flood insurance premiums. As discussed in the response to comments 7 and 8, the Flood Hazard Area Control Act rules require only new, reconstructed and substantially damaged buildings to be elevated. Buildings that have not been substantially damaged are not in any case required to be elevated. Furthermore, regarding potential impacts related to increased flood insurance rates, these rates are set by FEMA through the National Flood Insurance Program and are not in any way influenced by this rulemaking. However, buildings elevated in accordance with the Flood Hazard Area Control

Act rules will enjoy significantly reduced insurance premiums as compared with buildings that are not so elevated.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c.65) require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a comparison with Federal law.

The Department's authority for regulating development within flood hazard areas comes solely from State statute, specifically N.J.S.A. 58:16A-50 et seq., 58:10A-1 et seq., 58:11A-1 et seq. and 13:1D-1 et seq. The Flood Hazard Area Control rules are not promulgated under the authority of, or in order to implement, comply with, or participate in any program established under Federal law or under a State statute that incorporates or refers to Federal laws, Federal standards or Federal requirements. The Federal Emergency Management Agency (FEMA) delineates flood hazard areas in the State for the purposes of the Federal flood insurance program. However, there is no Federal agency or program that directly regulates activities in flood prone areas based on their potential flooding impacts. The Code of Federal Regulations, at 44 CFR Part 60, enables FEMA to require municipalities who participate in the National Flood Insurance Program (NFIP) to adopt certain flood hazard reduction standards for construction and development in 100-year flood plains. However, a community's participation in the NFIP is voluntary, and FEMA does not otherwise regulate land uses in flood hazard areas. Furthermore, the Federal flood reduction standards at 44 CFR Part 60 are administered by local governments.

However, while the amendments do not derive authority from any Federal law or under any State statute that incorporates or refers to Federal laws, standards or requirements, the FHACA rules allow the use of FEMA flood insurance studies in order to determine the extent of the flood hazard area design flood. FEMA periodically updates these studies, in which case the flood elevation at a particular location can change. This would, in turn, alter the extent of the flood hazard area and the elevation at which buildings must be constructed, in cases where an applicant chooses to use a FEMA flood insurance study.

Full text of the adopted amendments follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks *[thus]*):

(No change from proposal.)

Based on consultation with staff, I hereby certify that the above statements, including the Federal Standards Statement addressing the requirements of Executive Order 27 (1994), permit the public to understand accurately and plainly the purposes and expected consequences of this adoption. I hereby authorize this adoption.

_____ _____

Date

Bob Martin, Commissioner
Department of Environmental Protection