

Information about Rebuilding after Hurricane Sandy

In January, FEMA released the first phase of its Advisory Base Flood Elevation (ABFE) Maps for some portions of New York City affected by the storm.

These maps are meant to give homeowners and builders the best currently available information on flood risk for the areas impacted by Hurricane Sandy so they can make better decisions about how to rebuild. The ABFE Maps will include new advisory flood zone boundaries and advisory base flood elevations that better estimate the areas included in the new Flood Insurance Rate Maps that FEMA will produce and release to the public this summer.

Rebuilding to the new standards in the ABFE Maps will minimize future flood damage and will lead to lower insurance premiums in the long-term. This guide will answer some frequently asked questions about the new information from FEMA and the steps the City is taking.

For more information on FEMA's efforts, please visit: <https://sites.google.com/site/region2coastal/fags/advisory-bfe-faq>

Executive Order for Limited Suspension of Zoning and Building Code Changes

To facilitate recovery and rebuilding, the City has made immediate accommodations in zoning regulations and upgrades to the Building Code so that new construction can build to these higher standards.

Q: Why does the zoning need to be changed?

A: In many situations, elevating buildings to the FEMA-recommended elevations would conflict with current height and other limitations. Zoning restrictions also limit the types of buildings that can be rebuilt – for example, retail establishments located in residential-only districts. The Executive Order relaxes zoning to the extent necessary to allow construction to the new FEMA-recommended standards, and suspends zoning limitations that prevent the reconstruction of certain building types altogether.

Q: Why are these changes being made by Executive Order, rather than through the usual land use review process?

A: These changes are being made on a temporary, emergency basis in order to provide property owners with the ability to make decisions immediately based on the best available information from the Federal government on flood protection. The full land use review process takes approximately seven months. It is critical to the well-being of homeowners and the recovery of the City's neighborhoods and economy that decisions about rebuilding can be made now, based on the best available information about flood hazards.

Q: Are these changes temporary or permanent?

A: The Executive Order makes these changes on a temporary, emergency basis. The Department of City Planning will introduce a set of zoning text amendments that would make these changes permanent. These amendments will go through the City’s full land use review process.

Q: Who is affected by these changes and how?

A: The Executive Order temporarily suspends certain zoning provisions to the limited extent necessary to accommodate construction to the new recommended FEMA standards of the ABFE Maps. The principal features of the Order are as follows:

- The vast majority of buildings damaged by Sandy were one or two family homes. Under the Order, these homes can be raised above the ABFE if they meet floodproofing requirements up to this elevation.
- The Order also allows other buildings, whether existing or new, to measure their building heights from the ABFE, provided that they meet all floodproofing requirements up to this elevation.
- The Order enables certain legally “non-conforming” buildings (uses that do not comply with current use regulations, such as a store in a residential district) and “non-complying” buildings (ones that do not meet other zoning requirements, such as buildings built prior to current zoning that have smaller yards than currently required) that were severely damaged or destroyed during Hurricane Sandy, and that could not otherwise be rebuilt under current zoning rules, to be rebuilt as they existed before the storm, provided that they are floodproofed up to the ABFE.

Q: What is the Zoning Design Flood Elevation?

A: The Zoning Design Flood Elevation (ZDFE) is defined within the Executive Order and applicable only to buildings seeking relief under the Order. The ZDFE may be set at any level between the Advisory Base Flood Elevation (ABFE) and the ABFE plus the amount of freeboard set forth in the Building Code for the applicable building structural occupancy category. Buildings utilizing relief under the Executive Order must comply with all floodproofing requirements based on the ZDFE.

Q: I wasn’t in a FEMA flood zone (on the current FIRMs), but my home was flood damaged. How does the Executive Order apply to my building? Can I elevate my lowest floor and leave my utilities in the basement?

A: Many areas that experienced flooding during Hurricane Sandy were not within the currently effective FEMA 100-year flood zone, but are located within the new advisory 100-year flood zone. Zoning would not allow many buildings in these areas to be rebuilt or retrofitted to incorporate floodproofing consistent with the ABFE Maps. The Executive Order allows these buildings to be rebuilt or elevated to the ABFE shown on the ABFE Maps, provided that the building complies with all Building Code floodproofing requirements. Substantially damaged homes – where damage exceeds 50 percent of the pre-storm value of the building – that need zoning relief from the Executive Order must

comply fully with the Building Code requirements for the 100-year flood zone shown on the ABFE Maps. This means that the basement must be backfilled with dirt and the utilities must be relocated above the Advisory Base Flood Elevation.

Q: How do I determine whether my building was “substantially damaged”?

A: To determine if a building was substantially damaged, the cost to repair the structure to the pre-damage condition is compared to the market value of the structure. If the ratio of the repair costs to market value of the structure exceeds .5 (or 50%), the building is deemed substantially damaged. The two acceptable methods of determining market value are the assessment roll option and the appraisal option. For more information on determining the market value of a structure see Chapter 3600 of Title 1 of the Rules of the City of New York (1RCNY 3606-01) at <http://www.nyc.gov/html/nycrules/downloads/rules/fdobcc10-22-08j.pdf>.

Q: Will this Executive Order help the large office buildings and hospitals where mechanical systems in basements were flooded?

A: This Executive Order is directed at smaller buildings which can more easily benefit from being elevated higher than they are currently. Other provisions address the relocation of mechanicals in larger structures. In particular, the Zone Green text amendment adopted in the spring of 2012 allows all types of accessory mechanical systems on rooftops in commercial districts and medium and higher density residential districts. In buildings where mechanical systems are below the flood elevation, these systems can now be relocated to the roof, or to other floors within the building. Zoning regulations allow mechanical space to be deducted from floor area calculations in these districts.

Q: How do these changes relate to all the effort the Administration has put into rezonings that put in place appropriate heights for each community?

A: Floodproofing standards are set by the Federal government and the National Flood Insurance Program. The purpose of the Executive Order is to enable buildings to be elevated to protect them against future flood damage and flood insurance premium increases. While the Executive Order will result in changes in the way buildings are built, it does so by providing the minimum relief necessary to accommodate the raising of new and existing buildings above the elevations recommended by FEMA.

The difference in the height of new buildings will vary depending on the ABFE designated by FEMA. In most neighborhoods, this difference will amount to a few feet. Where existing buildings are raised above the ABFE, the allowed relief from zoning height limits is the minimum needed to raise the building while keeping it whole. The amount of relief will depend on the height of the pre-existing building as well as on the applicable ABFE. The Executive Order does not increase the permitted floor area in any building.

Q: Why is the Building Code changing?

A: The Building Code is being changed to incorporate requirements for “freeboard.” This is recognized as a best practice, and is now included in State and model building codes.

Q: What is “freeboard” and why is it necessary?

A: “Freeboard” is the practice of raising the flood elevation to which a building is designed one or two feet above the required elevation. This provides an additional margin of safety to protect against severe storms and increased future flood risks.

Q: Who is affected by this change and how?

A: Most types of buildings are required by the Building Code to add one foot of additional elevation above the base flood elevation shown on the effective FIRMs. One- and two-family homes are required to add two feet. Critical facilities, such as police or fire stations, that are located in A zones and V zones must add two or three feet, respectively. This applies to all buildings in the current FEMA 100-year flood zone, as shown on the FEMA Flood Insurance Rate Maps.

Q: Are buildings damaged by Hurricane Sandy required to be floodproofed?

A: Under FEMA requirements and the Building Code, buildings that are “substantially damaged” – where damage exceeds 50 percent of the pre-storm value of the building – must meet the floodproofing requirements of 2008 New York City Building Code. Those who want to build to the new ABFE Maps will be allowed to do so under the Executive Order and must floodproof up to the Advisory Base Flood Elevation issued by FEMA at a minimum.

Q: What if I am rebuilding my home, but it previously didn’t comply with zoning and code? Will I be allowed to rebuild it as it was before the storm?

A: Reconstruction of substantially damaged buildings (damage exceeds 50 percent of the pre-storm value of the building) in the 100-year flood zone as shown on the FEMA Flood Insurance Rate Maps must comply with the Building Code, including floodproofing requirements. Buildings that were legally nonconforming or noncomplying with zoning – including many buildings constructed prior to the adoption of current zoning regulations – may be rebuilt as they existed prior to the storm, provided that they comply with the Building Code requirements for floodproofing up to the Advisory Base Flood Elevation at a minimum.

Q: I am rebuilding my home, which was damaged in the storm. Can I add “freeboard” above the Advisory Base Flood Elevation?

A: Yes. The Executive Order allows zoning relief for buildings that select as their Zoning Design Flood Elevation – the height to which the building complies with all floodproofing requirements of the Building Code (see question above regarding definition of Zoning Design Flood elevation) – a height anywhere between the ABFE and the ABFE plus the amount of freeboard applicable to the building’s structural occupancy category (generally 2 feet for one- and two-family homes, and 1 foot for most other buildings).

Q: I had a legal two-family home that was grandfathered after my neighborhood was rezoned to single family residential. Can I rebuild my home as a 2-family?

A: Yes, provided that the reconstructed building complies with all floodproofing standards of the Building Code. Under the terms of the Executive Order the building may be reconstructed and elevated up to the ABFE without violating zoning height and other limitations.

Q: I had a basement apartment in my house. Can I rebuild it?

A: Reconstruction of substantially damaged buildings (damage exceeds 50 percent of the pre-storm value of the building) in the 100-year flood zone as shown on the FEMA Flood Insurance Rate Maps must comply with the Building Code, including floodproofing requirements. Below-grade spaces are not allowed under code in such situations. If the building is outside the 100-year flood zone on the FEMA FIRMs, but in the 100-year flood zone on the Advisory Base Flood Elevation Maps, it is highly advisable not to reconstruct such spaces below grade, both because of the risk of future flood damage and because future flood insurance premiums under the National Flood Insurance Program for such a space are likely to be several times higher than for a building that complies with floodproofing requirements. The Executive Order does not provide zoning relief if an owner in this situation elects to reconstruct such spaces below grade.

Q: I had a garage below grade with a driveway that sloped down to it? Can I rebuild this garage?

A: Reconstruction of substantially damaged buildings (damage exceeds 50 percent of the pre-storm value of the building) in the 100-year flood zone as shown on the FEMA Flood Insurance Rate Maps must comply with the Building Code, including floodproofing requirements. Downward-sloping driveways, which collect floodwaters quickly in a flood event, are not allowed under code in such situations.

If the building is outside the 100-year flood zone on the FEMA FIRMs, but in the 100-year flood zone on the Advisory Base Flood Elevation Maps, it is advisable not to reconstruct such spaces below grade, both because of the risk of future flood damage and because future flood insurance premiums under the National Flood Insurance Program for such a space are likely to be higher than for a building that complies with floodproofing requirements. The Executive Order does not provide zoning relief if an owner in this situation elects to reconstruct such spaces below grade.

Q: My house was substantially damaged but not destroyed and I have a basement. Do these new rules mean that I have to back fill my basement?

A: Substantially damaged buildings in the 100-year flood zone as shown on the FEMA Flood Insurance Rate Maps must comply with the Building Code, including floodproofing requirements. Homes rebuilt on the existing foundation must back fill the basement and relocate all utilities located in the basement to the appropriate design flood elevation. Homes that do not or cannot reuse the old foundation may not reconstruct the basement.

Q: Do I have to build on the same footprint as my previous home?

A: If your home can be rebuilt in compliance with zoning, except that zoning relief is needed only to measure the permitted building height under zoning from the Advisory Base Flood Elevation, the home may be rebuilt in any configuration that complies with the regulations. However, relief from zoning allowed under this Executive Order for the elevation of previously existing one- and two-family homes to raise the lowest floor above the ABFE, or for the reconstruction of nonconforming or noncomplying buildings, is conditioned on rebuilding within the same footprint that previously existed.

There is an exception for homes where elevating a one- or two-family house necessitates shifting the building up to 3 feet into a rear yard to accommodate access and egress.

Q: Where should I put my mechanical equipment?

A: Mechanical equipment should be located above anticipated flood levels or otherwise protected from flood waters. Building Code floodproofing standards require that mechanical equipment be located above the flood elevation to which the building is designed. Depending on this elevation, this can entail raising it up on a pedestal or moving it to a higher floor.

In lower-density districts where the floor area deduction allowed for mechanical equipment is limited, the Executive Order allows the Buildings Commissioner to increase the amount of mechanical space allowed to be deducted from floor area where it is determined that this is necessary for floodproofing.

Q: If I have to change the plan of my house to put mechanical equipment upstairs, does that mean I can build more space under the Executive Order?

A: Mechanical space in many instances may be deducted from floor area. This may allow the construction of additional above-grade space under zoning. However, keep in mind that the Executive Order conditions certain types of zoning relief on reconstruction of the building within its previously existing footprint.

Q: Do I need to build a ramp up to my new elevation to make my home ADA compliant?

A: In general, one- and two-family homes are not subject to ADA accessibility requirements. However, certain semi-detached and attached one- and two-family homes subject to the Federal Fair Housing Act since March 13, 1991 may require entrance accessibility. A licensed design professional can help you determine whether your building is subject to accessibility requirements.

Q: What if there is not enough room in my front yard to build stairs high enough to reach this elevation?

A: Relief from zoning allowed under this Executive Order for previously existing one- and two-family homes is conditioned on rebuilding within the same footprint that

previously existed. However, there is an exception for homes where elevating the house necessitates shifting the building up to 3 feet into a rear yard to accommodate access and egress.

Q: What if I want to elevate my first floor higher than the ABFE and freeboard? Does the Executive Order relax height limits to permit this?

A: The Executive Order only relaxes zoning height limits to the extent necessary to raise the lowest floor of the building to a Zoning Design Flood Elevation selected by the owner, which may range from the ABFE to the ABFE plus the amount of freeboard applicable to the building's structural occupancy category (generally 2 feet for one- and two-family homes, and 1 foot for most other buildings).