

City of Flagler Beach **AGENDA ITEM # 23**

Item Summary and Recommendation

SUBJECT: Ordinance 2015-09, amending floodplain regulations in Ordinance 2015-03

BACKGROUND: Ordinance 2015-03, adopted February 26, 2015, contains higher regulatory standards than those required by FEMA and the Florida Building Code. Representatives in the local home builders community have expressed their opinion that two of those higher standards, i.e., increasing freeboard from one foot to two feet, and the 10-year cumulative substantial improvement (CSI), pose a hardship on homeowners, particularly those planning additions.

The issue was brought before the PAR Board on July 7, 2015, which recommended returning the freeboard to 1 foot for *additions*, if, after consulting with FEMA on the change, it did not have a negative impact on our Community Rating System score, and by extension, make flood insurance more costly for our residents. The change would impact flood zone AE only, not VE nor Coastal A Zone.

RECOMMENDATIONS: A compromise: retain the two feet of freeboard on new home construction, and reduce it to one foot for additions by amending applicable sections of Ord 2015-03.

ATTACHMENTS:

1. Ordinance 2015-09, amending CSI and Freeboard for additions;
2. FEMA Fact Sheet: Building Higher in Flood Zones: Freeboard – Reduce Your Risk, Reduce Your Premium;
3. PAR Board handout dated 7.7.2015: Insurance Premiums: 1 ft vs 2 ft of Freeboard
3. A report on points earned by the City for Higher Regulatory Standards towards our CRS Score

SUBMITTED BY: Kay McNeely, CFM **DATE:** August 20, 2015

ORDINANCE NO. 2015-09

AN ORDINANCE BY THE CITY COMMISSION AMENDING ORDINANCE 2015-03, APPENDIX "A" LAND DEVELOPMENT REGULATIONS, SECTIONS 4.07.03.(D)(3) AND 4.07.09; SECTION 5.00.10 AMENDING SECTION 202 OF THE FLORIDA BUILDING CODE, BUILDING; SECTION 5.00.11 AMENDING SECTION 202 AND SECTION 1103.5 OF THE FLORIDA BUILDING CODE, EXISTING BUILDING; PROVIDING FOR APPLICABILITY; REPEAL; SEVERABILITY; AND AN EFFECTIVE DATE.

WHEREAS, the City Commission determined that it is in the public interest to adopt the floodplain management regulations that are coordinated with the *Florida Building Code* and passed Ordinance 2015-03 on February 26, 2015; and

WHEREAS, by passage of Ordinance 2015-03, Section 4.07.03.(D)(3) Substantial improvement and substantial damage determinations and Section 5.00.10 and Section 5.00.11 amendments to definitions in the *Florida Building Code*, the City Commission adopted a higher standard than required by FEMA or the *Florida Building Code* by requiring the Floodplain Administrator to evaluate permits for alterations, improvements, and repairs of flood damage over a 10 year period; and

WHEREAS, by passage of Ordinance 2015-03, Section 6, Article V, Development and Improvement Standards, Sec. 5.00.12 the City Commission adopted a higher standard than required by FEMA or the *Florida Building Code* by requiring one- and two-family dwellings in flood hazard areas not designated as Coastal A Zones or Coastal V Zones, and additions to dwellings, to have their lowest floors elevated to or above the base flood elevation plus 2 feet, or the design elevation, whichever is higher; and

WHEREAS, the City Commission has in retrospect determined that amendments to Section 4.07.03.(D)(3) and R322.2.1 impose an undue hardship, especially on residential construction;

NOW, THEREFORE, BE IT ORDAINED by the City Commission of the City of Flagler Beach that the following Sections be modified accordingly:

SECTION 1. The Appendix A, Land Development Regulations, Article IV, Section 4.07 Floodplain Management, Section 4.07.03 and Section 4.07.09 are hereby amended as follows:

Sec. 4.07.03. Duties and powers of the Floodplain Administrator.

(D) Substantial improvement and substantial damage determinations. For applications for building permits to improve buildings and structures, including alterations, movement, enlargement, replacement, repair, change of occupancy, additions, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

(1) *Unchanged.*

(2) *Unchanged.*

(3) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage; ~~and the determination requires evaluation of previous permits issued for improvements and repairs over a 10-year period as specified in the definition of "substantial improvement"; for proposed work to repair damage caused by flooding, the determination requires evaluation of previous permits issued to repair flood-related damage as specified in the definition of "substantial damage"; and~~

(4) Unchanged

Sec. 4.07.09. Definitions.

The definitions of "Substantial Damage" and "Substantial Improvement" are hereby amended as follows:

Substantial damage. Damage of any origin sustained by a building or structure whereby the cost of restoring the building or structure to its before-damaged condition would equal or exceed 50 percent of the market value of the building or structure before the damage occurred. ~~The term also includes flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damage occurred. [Also defined in FBC, B Section 1612.2., as modified by the City.]~~

Substantial improvement. ~~Any combination of repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure taking place during a 10-year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. For each building or structure, the 10-year period begins on the date of the first improvement or repair of that building or structure subsequent to January 1, 2005. If the structure has incurred substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions. [Also defined in FBC, B, Section 1612.2., as modified by the City.]~~
Any repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the structure has incurred "substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions. [Also defined in FBC, B, Section 1612.2.]

SECTION 2. The Appendix A, Land Development Regulations, Article V, Development Design and Improvement Standards, Section 5.00.10 is hereby amended by the following technical amendments to the *Florida Building Code, Building*:

The previously adopted definitions of "Substantial Damage" and "Substantial Improvement"

provided in Sec. 202, Florida Building Code, Building, are hereby amended as follows:

Substantial Damage. ~~Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. The term also includes flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.~~

Substantial improvement. ~~Any combination of repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure taking place during a 10-year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. For each building or structure, the 10-year period begins on the date of the first improvement or repair of that building or structure subsequent to January 1, 2005. If the structure has incurred substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions. [Also defined in FBC, B, Section 1612.2., as modified by the City.]~~
Any repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the structure has incurred "substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions. [Also defined in FBC, B, Section 1612.2.]

SECTION 3. The Appendix A, Land Development Regulations, Article V, Development Design and Improvement Standards, Section 5.00.11 is hereby amended to include the following technical amendments to the Florida Building Code, Existing Building.

The previously adopted definitions of "Substantial Damage" and "Substantial Improvement" provided in Sec. 202, Florida Building Code, Existing Building, are hereby amended as follows:

Substantial Damage. ~~Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. The term also includes flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.~~
Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. The term also includes flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

Substantial improvement. ~~Any combination of repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure taking place during a 10-year period, the cumulative cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. For each building or structure, the 10-year period begins on the date of the first improvement or repair of~~

~~that building or structure subsequent to January 1, 2005. If the structure has incurred substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions. [Also defined in FBC, B, Section 1612.2., as modified by the City.]~~
Any repair, reconstruction, rehabilitation, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the structure has incurred "substantial damage," any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions. [Also defined in FBC, B, Section 1612.2.]

Chapter 11 Additions, of the Florida Building Code, Existing Building is hereby amended as follows:

1103.5 Flood hazard areas. Additions and foundations in flood hazard areas shall comply with the following requirements:

1. For horizontal additions that are structurally interconnected to the existing building:
 - 1.1. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential as applicable.
 - 1.2. If the addition constitutes substantial improvement, the existing building and the addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential as applicable.
2. For horizontal additions that are not structurally interconnected to the existing building:
 - 2.1. The addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.
 - 2.2. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.
3. For vertical additions and all other proposed work that, when combined, constitute substantial improvement, the existing building shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.
4. For a raised or extended foundation, if the foundation work and all other proposed work, when combined, constitute substantial improvement, the existing building shall comply with Section 1612 of the Florida Building Code, Building.
5. For a new foundation or replacement foundation, the foundation shall comply with Section 1612 of the Florida Building Code, Building, or Section R322 of the

Florida Building Code, Residential, as applicable.

Exception: Horizontal additions to one- and two-family dwellings in flood hazard areas not designated as coastal high-hazard areas or Coastal A Zones shall have the lowest floor elevated to or above the lowest floor of the existing dwelling or the base flood elevation plus 1 foot, whichever is higher, and shall comply with the other applicable requirements of Section R322 of the Florida Building Code, Residential.

SECTION 4. INCLUSION INTO THE CODE OF ORDINANCES.

It is the intent of the **City Commission** that the provisions of this ordinance shall become and be made a part of the **City of Flagler Beach's** Code of Ordinances, and that the sections of this ordinance may be renumbered or re-lettered and the word "ordinance" may be changed to "section," "article," "regulation," or such other appropriate word or phrase in order to accomplish such intentions.

SECTION 5. SEVERABILITY.

If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any part thereof, other than the part so declared.

SECTION 6. EFFECTIVE DATE. The effective date of this ordinance shall be immediately upon its enactment.

PASSED ON FIRST READING THIS 27th DAY OF AUGUST, 2015.

PASSED AND ADOPTED THIS _____ DAY OF _____, 2015

CITY OF FLAGLER BEACH, FLORIDA
CITY COMMISSION

Linda Provencher, Mayor

ATTEST:

Penny Overstreet, City Clerk



FEMA

Fact Sheet

Building Higher in Flood Zones: Freeboard – Reduce Your Risk, Reduce Your Premium

One way flood risk is communicated is through maps that show base flood elevations (BFEs), or the height floodwaters would reach during a 1-percent-annual-chance flood in any given year.

Freeboard is a term used by FEMA's National Flood Insurance Program (NFIP) to describe a factor of safety usually expressed in feet above the 1-percent-annual-chance flood level. The NFIP requires the lowest floor of structures built in Special Flood Hazard Areas (SFHAs) to be at or above the BFE, so a structure built with freeboard would have its lowest floor 1 foot or more above the BFE. Adding freeboard will reduce NFIP insurance premiums.

Benefits of Freeboard

There are many benefits to incorporating freeboard into new construction plans, the most important being safety (Figure 1). Freeboard provides a margin of safety against extraordinary or unknown flood risk. BFEs reflect estimates of flood risk, but there are many unknown factors that can cause flood heights to rise above the BFE, such as wave action, bridge and culvert openings being blocked by debris, and development in the floodplain. It is important to remember that floods more severe than the 1-percent-annual-chance event can and do occur.

Other benefits of freeboard include incurring less damage, easier and faster cleanup after a flood event, and lower flood insurance rates. Incorporating freeboard into building plans can result in substantial savings in flood insurance premiums each year, especially for buildings located in Zone V (a coastal flood zone at risk from wave action). Figure 2 shows potential flood insurance rates based on the amount of freeboard in both riverine (Zone AE) and coastal (Zone VE) environments.

Communities that incorporate freeboard into their local floodplain ordinances can earn discounts on flood insurance by participating in the NFIP's Community Rating System (CRS) program. CRS rewards communities that engage in floodplain management activities that exceed NFIP standards by offering discounts of up to 45 percent on flood insurance policies written for SFHAs in NFIP-participating communities.



Figure 1: House elevated above the BFE with 1 foot of freeboard

What is Floodplain Management?

Floodplain management is the operation of a program of preventive and corrective measures for reducing flood damage. FEMA helps communities develop floodplain management regulations that comply with NFIP regulations. Communities may adopt more restrictive regulations. Community officials may have knowledge of local conditions that require higher standards than the NFIP regulations, particularly for human safety.

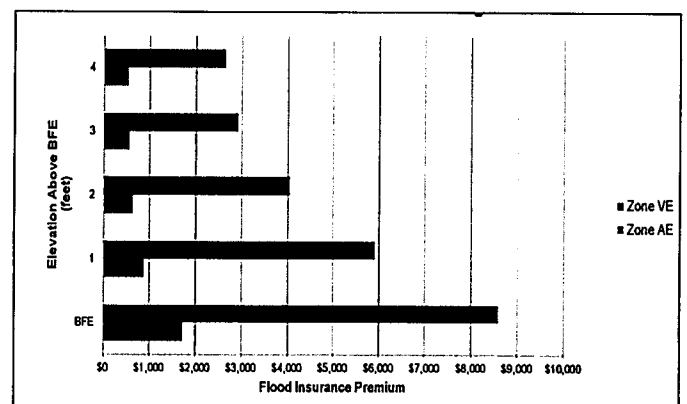


Figure 2: Maximum coverage for a \$250,000 residential building and \$100,000 contents

Benefit-Cost Comparison

Incorporating freeboard into new construction is extremely cost effective. The up-front costs are generally only about 0.25 to 1.5 percent of the total construction costs for each foot of freeboard. However, the long-term savings on flood insurance will more than offset these costs.

For example, adding 2 feet of freeboard to a new home might add \$20 a month to the mortgage payment, or \$240 per year. The resulting flood insurance savings could be more than \$1,000 a year for a building in Zone AE (for instance, in a riverine flood zone not affected by wave action) and \$2,000 a year in Zone VE.

Many States and communities have incorporated freeboard requirements into the elevation and floodproofing requirements stipulated by the NFIP. Freeboard requirements can range from 6 inches to 4 feet, and it would be up to the community to decide what is most appropriate given their location and other community conditions.

Historically Speaking...

Freeboard was (and still is) a nautical term. It refers to the height of a ship's deck above the waterline. If you think of the lowest floor of your house as the deck of your ship, and the BFE as the height of the sea, freeboard is the extra height that keeps the larger waves off your deck.

FOR MORE INFORMATION...

FEMA's Floodplain Management Branch
About floodplain management's role in the NFIP:
<http://www.fema.gov/floodplain-management>

FEMA 347 – Above the Flood: Elevating Your Floodprone House:
<http://www.fema.gov/media-library/assets/documents/725?id=1424>

FEMA 312 – Homeowner's Guide to Retrofitting:
<http://www.fema.gov/media-library/assets/documents/480?id=1420>

Homebuilder's Guide to Coastal Construction:
A series of fact sheets providing information about responsible building practices including freeboard.
<http://www.fema.gov/library/viewRecord.do?id=2138>

FloodSmart
Information for consumers and insurance agents about flood insurance and the NFIP.
www.FloodSmart.gov



INSURANCE PREMIUMS: ONE FOOT VS TWO FEET OF FREEBOARD

An actual Flagler Beach residence* in Special Flood Hazard Area Zone AE, BFE = 5.0 feet

Insurance Type	BFE +1 foot (6.1' FFE)	BFE + 2 feet (7.1 FFE)
\$250,000 Structure	\$659	\$445
\$100,000 Contents	\$244	\$166
Total Annual Premium	\$902	\$611
Difference= \$291		

The homeowner with one foot of freeboard is paying 47% more than the homeowner with two feet of freeboard.

BTW: In this particular example, the homeowner has a homestead exemption. The premium includes a \$25 primary home HFIAA Surcharge of \$25. For part-time residents not homesteaded, the surcharge is \$250. (Recall that the HFIAA is the Homeowners Flood Insurance Affordability Act of 2014, signed by President Obama to roll back parts of the Biggert-Waters Act of 2012.)

*Data Source: Neal Tipton of Beachside Insurance, Flagler Beach, on 7.6.2015

**FEMA's NFIP Community Rating System
Activity 430 Higher Regulatory Standards (2013 Edition)
Comparison of 2,042 possible points w/ FB Score of 276**

Heading: Development Limitations

CRS Abbr: 432.a. DL

Description:

Prohibiting fill and other ground-altering measures can protect existing development and habitat, improve water quality, and maintain the flood attenuating benefits of natural areas.

KMc Notes:

City received 66 points for Compensatory Storage (see DL1.b., below)

Possible Points: 1330

FB 2015 Credited Points: 66

Heading: Compensatory Storage

CRS Abbr: 432.a. DL1.b

Description:

One method to offset the impacts of the use of fill is to require compensatory storage, but compensatory storage does not compensate for the adverse impact on other natural floodplain functions. Therefore, it is worth approximately half the credit. This credit is for regulations that require new developments to provide compensatory storage at hydraulically equivalent sites up to a ratio of 1.5:1.

KMc Notes:

280 possible points from DL1.a OR possibly as much as 130 for DL1.b.

Possible Points: 130

FB 2015 Credited Points: 66

Heading: Freeboard

CRS Abbr: 432.b. FB

Description:

The NFIP requires that the lowest floor of residential structures be elevated to or above the base flood elevation and that non-residential structures be elevated or floodproofed to or above the base flood elevation. Attached garages and utilities (including electrical, heating, ductwork, ventilating, plumbing and air conditioning) must also be protected to the base flood elevation.

A freeboard requirement adds height above the BFE to provide an extra margin of protection to account for waves, debris, miscalculations, or lack of data.

If the community requires that (utilities) be elevated or made of flood-resistant materials above the BFE, but does not require these facilities to be elevated or protected to the freeboard level, then the value for the freeboard is considered to be 75% of the elevation requirement.

KMc Notes:

Points were deducted because: 1) no language expressly requires utilities to be elevated to 2 feet, and 2) Because two feet of FB is new, no ECs have been submitted yet - credit should be awarded at next 5 year cycle visit in 2020. Points were for 1 foot of freeboard. (Interesting Note: FEMA and ISO do not agree that utility language must be more specific. FEMA says the new Ord references the FBC which states to use the adopted freeboard, and that should be sufficient. FEMA was not aware that ISO was deducting points until brought to their attention during our ISO visit in Feb. FDEM (FEMA's state rep) and ISO are meeting on this currently to see if all FL communities that received deductions for lacking more specific utility language can be fully credited.)

Possible Points: 500

FB 2015 Credited Points: 76

Heading: Building Code

CRS Abbr: 432.h. BC

Description:

BCGES was initiated by the insurance industry after determining that the catastrophic losses from Hurricane Andrew were compounded by poor building code enforcement. BCGES assesses the building codes in effect in a community and how a community enforces them, with special emphasis on mitigation of losses from natural disasters. BC1 recognizes that communities have adopted the current editions of the appropriate codes.

KMc Notes:

City received 48 pts for BC1. We may have been docked 2 pts for having septic systems.

Possible Points: 50

FB 2015 Credited Points: 48

Heading: Building Code

CRS Abbr: 432.h. BC

Description:

BC2 credits the community's Building Code Effectiveness Grading Schedule (BCEGS) classification.

KMc Notes:

City piggybacked on County's classification number of 3 for 30 points because in 2012 the County was doing City inspections. (County's classification expired July 2015.)

Possible Points: 50

FB 2015 Credited Points: 30

Heading: Local Drainage Protection

CRS Abbr: 432.i. LDP

Description:

LDP credit is for regulations that ensure that every new building will be built so that it is protected from local drainage flooding. A regulation that only addresses drainage plans in new subdivisions is not credited.
LPD1 = 40 x number of feet the lowest floor (including basement) must be above the crown of the nearest street or the highest grade adjacent to the building
LDP2 = 40 points, if the regs require that, as a condition of receiving a building permit, the applicant must prepare a site plan that (a) accounts for street flooding and local drainage from and onto adjoining properties, and (b) protects the building from local drainage flows
LDP3 = EITHER 20 points, if the regs require the applicant to provide positive drainage away from the building site to an approved point of collection that does not create a hazard or problem on neighboring properties OR 10 points if the regulations require that the applicant provide positive drainage away from the building site.
LDP4 = 20 points, if the regs require that the increased volume of runoff due to the development (from the 100-year storm) is kept on-site, such as via a low-impact development measure.

KMc Notes:

ISO credited LDP3. There are no points for LDP4 because City stormwater projects have been built to the 10-year and 25-year rain event, not the 100-year.

Possible Points: 120

FB 2015 Credited Points: 10

Heading: State-mandated Regulatory Standards

CRS Abbr: 432.n. SMS

Description:

KMc Notes:

Points were received for the state CCCL.

Possible Points: 20

FB 2015 Credited Points: 20

Heading: Regulations Administration

CRS Abbr: 432.o. RA

Description:

RA1.

- a. 5 points for each CFM or graduate of an approved EMI class OR
- b. 25 points, if all proposed development projects in the floodplain and all final inspections and project approvals are reviewed and approved by a CFM. The credit is provided as long as no new floodplain development project is used or occupied without the review and approval of a CFM.

KMc Notes:

I have been a Certified Floodplain Manager since 2008. Beginning in February of this year, I started reviewing floodplain building permits along with the City Engineer / Director of Public Works.

Possible Points: 67

FB 2015 Credited Points: 25

KMc, 8.20.2015