

INSTRUCTIONS AND NOTES – FINAL (April 3, 2017)

Model Code-Companion Floodplain Management Ordinance For Communities with Inland (Zone A) and Coastal High Hazard Areas (Zone V)

TECHNICAL SUPPORT AND ORDINANCE REVIEW:

flood.ordinance@em.myflorida.com

Please include your community's name in the subject line.

Please allow plenty of time for at least two reviews (longer if you make many changes). At a minimum, provide the first draft at least 6 weeks before you need to submit it for first reading. At any given time we may have many draft ordinances under review and cannot guarantee getting back to you in just a few days.

Beginning with the 2010 edition the Florida Building Code (FBC) includes the flood provisions from the model International Code Series that forms the basis of the FBC. For background and more information on this transition, refer to the *Frequently Asked Questions* prepared by the Florida DEM State Floodplain Office:
http://www.floridadisaster.org/Mitigation/SFMP/lobc_resources.htm. Excerpts of the flood provisions of the FBC can be downloaded from the same webpage.

Changes to local floodplain management regulations are necessary to properly coordinate with the FBC. A model ordinance that is coordinated with the FBC and satisfies the requirements of the National Flood Insurance Program (NFIP) was developed. It is designed to repeal and replace existing floodplain management regulations. A crosswalk that demonstrates the model ordinance is consistent with the NFIP is posted at the link shown above. Also at that link is a summary of duties and responsibilities that communities agree to when they decide to participate in the NFIP.

By State law, only the FBC governs the design and construction of buildings. This makes it necessary for communities to expeditiously consider and take action to adopt the model ordinance. As of early 2017, more than 380 of Florida's 468 NFIP communities have used the model ordinance or are in the process of adopting it, and the rest are expected to do so in the coming year. Alternatively, a very small number of communities have elected to revise their existing regulations to remove flood provisions for buildings and structures and correct any inconsistencies with the NFIP. Note: this approach involves a lot of time and attention to detail and, in the end, the result effectively mirrors the model ordinance.

This document contains instructions and explanatory notes for the model floodplain management ordinance. The notes are keyed to the sections of the model ordinance. These notes are not intended to explain every provision, but to highlight those that clarify and those that are new to floodplain management (FPM) regulations. Note: as of the effective date of the 5th Edition FBC the local administrative code amendments previously required by FEMA are no longer required because the Florida Building Commission incorporated them into the 5th Edition.

The following are important aspects of the model FPM ordinance:

1. The FPM model is written in regulatory language, eliminating permissive and unenforceable language that appears in many local regulations.
2. The FPM model is coordinated with the FBC. The FBC contains requirements for buildings and structures; the FPM model contains other requirements necessary for consistency with the NFIP. In order to fulfill community commitments to the NFIP, the FPM model requires buildings and structures that are exempt from the FBC and development other than buildings to comply with requirements of the ordinance if located in flood hazard areas.
3. As written, the Building Official and the Floodplain Administrator are responsible for different aspects required to fulfill a community's commitment and responsibilities to the NFIP. In many Florida communities both functions are fulfilled by the same office or person. However, when enforcing the FBC, that person is acting as the Building Official, and when enforcing the floodplain management ordinance, that person is acting as the Floodplain Administrator. The fact that two titles are used should not be cause for confusion (i.e., one person can wear two hats).
4. The FPM model identifies the duties of the Floodplain Administrator. The duties of the Building Official are specified in the FBC. Section 553.73(5), F.S. (shown below), allows assignment of "the duty to enforce all or portions of flood-related code provisions to the appropriate agencies of the local government." The FPM model is designed so that the Floodplain Administrator handles virtually all duties that are not the responsibility of the Building Official.
5. The FPM model includes specific requirements for development other than buildings that may appear to be "new," but that are based on the overall performance expectation of the NFIP for any development, including activities other than buildings. The specific requirements come from ASCE 24 and FEMA guidance (ASCE 24 is a standard referenced by the FBC). The specificity is intended to help both the local official and the applicant understand what constitutes flood damage resistance for such activities.
6. The basic FPM model does not include the common "higher standards" that many Florida communities have adopted. However, instructions and sample language to adopt many of the more common higher standards have been prepared and are available at the DEM web site referenced above. Assistance will be provided to any community that elects to adopt other higher standards or otherwise modify the model.

Inter-Local Agreements: Many Florida communities have an inter-local agreement or arrangement under which one community (typically a county) agrees to enforce FPM requirements within another community's jurisdiction. Pursuant to section 163.01, F.S., this agreement should be in writing. DEM encourages both communities to get together to review the model ordinance. If the two communities have different requirements complications can arise. An efficient way to avoid having different requirements is for both communities to adopt ordinances that are exactly the same and make the same code amendments for higher standards, if any. DEM has developed a model inter-local agreement for floodplain management which can be modified easily to include enforcement of the building code. Download the model agreement at the webpage noted above and contact DEM at floods@em.myflorida.com.

553.73, Florida Statutes

(5) Notwithstanding subsection (4), counties and municipalities may adopt by ordinance an administrative or technical amendment to the Florida Building Code relating to flood resistance in order to implement the National Flood Insurance Program or incentives. Specifically, an administrative amendment may assign the duty to enforce all or portions of flood-related code provisions to the appropriate agencies of the local government and adopt procedures for variances and exceptions from flood-related code provisions other than provisions for structures seaward of the coastal construction control line consistent with the requirements in 44 C.F.R. s. 60.6. A technical amendment is authorized to the extent it is more stringent than the code. A technical amendment is not subject to the requirements of subsection (4) and may not be rendered void when the code is updated if the amendment is adopted for the purpose of participating in the Community Rating System promulgated pursuant to 42 U.S.C. s. 4022, the amendment had already been adopted by local ordinance prior to July 1, 2010, or the amendment requires a design flood elevation above the base flood elevation. Any amendment adopted pursuant to this subsection shall be transmitted to the commission within 30 days after being adopted.

Instructions and General Notes:

Please read the complete model ordinance and follow along with the notes below that are keyed to the same sections. You will find it useful to download the flood excerpts from the FBC. We encourage the Floodplain Manager and the Building Official to get together to do this review.

The provisions of the model ordinance are organized as follows:

- **SECTION 1** is "recitals" to incorporate the Whereas clauses by reference.
- **SECTION 2** contains the complete FPM regulations that are coordinated with the FBC. The regulations are organized to match the organization of the code, with administrative provisions in Article 1, definitions in Article 2, and technical provisions in Article 3.

Step One. The first step is to determine which flood zones are identified on your community's Flood Insurance Rate Maps. If your FIRM has zones that start with the letter "A" and zones that start with the letter "V," these notes and the model ordinance that are identified "Zones_A-V" are the correct documents. Please check your FIRMs first, and contact Technical

Support if you need help making this determination (email listed above).

Step Two. Begin to complete the community-specific information to be inserted where noted in **{bracketed bold blue}**:

1. **{name of community}** is the legal name of the county, city, village, or town
2. **{community's governing body}** is the city commission, board of county commissioners, town council, etc.
3. **{title of FIS}** title of the current, effective Flood Insurance Study that includes the community (check the actual title; **do not** simply insert the community name)
4. **{date of FIS}** date of current, effective FIS
5. **{insert name}** of applicable Water Management District
6. **{body designated to hear variances}** see note for Sec. 107.1.
7. **{date the community's first floodplain management ordinance was adopted}** and **{date of regular program entry}**. Note that these may or may not be the same date. You could research to determine the date the first ordinance was adopted or simply use the date of entry into the NFIP's regular program that will be provided by Technical Support.

Step Three. Carefully consider any modifications you may wish to make to the model ordinance. Remember that most provisions in the model are written to satisfy NFIP requirements, which means DEM must be very careful to ensure changes are acceptable. Please contact Technical Support if you have questions or would like a preliminary review of changes you're considering. We recommend NOT re-numbering the sections of your draft to match your local code until after all the text changes are reviewed and approved.

Step Four. Have Technical Support review your tailored ordinance in <track changes> mode before you get too far along in your adoption process. This is especially important if you propose to modify, delete, or add any provisions. If additional changes – no matter how minor – are made after Technical Support's review, please send it for another review (this is especially important if changes are made or sections renumbered after legal review). Final review and approval by DEM and FEMA will be much easier if Technical Support has reviewed and approved ALL changes. Technical Support will also double check your re-numbering and ensure all of the cross references are change correctly.

Step Five. Upon adoption and execution, send Technical Support a digital copy of the adopted ordinance, with all signatures. At that time, DEM will do a final review to complete the process and send an approval letter. If FEMA has established a deadline for ordinance revisions, DEM will submit your adopted ordinance to FEMA for approval (you'll be copied).

Step Six. Upon adoption and execution, submit local technical code amendments, if any, to the Florida Building Commission. Pursuant to 553.73(4)(a), F.S., local code amendments must be transmitted to the Commission within 30 days after enactment. Mark the pages of the adopted ordinance that show the FBC amendments and scan the first page, the marked pages showing FBC amendments, and the signature page and send to the Commission:

mo.madani@dbpr.state.fl.us. Be sure to identify the pages on which the code amendments appear. See sec. 553.73(4), F.S.

Sample Forms:

DEM developed some sample forms your community should consider using. A good time to consider adding to your administrative procedures is when you start the process to adopt regulations based on the Model Ordinance. The forms are available on the webpage listed above.

1. SI/SD Sample Notice for Property Owners, Contractors, and Design Professionals (from FEMA P-758). FEMA's sample is based on the NFIP minimum requirements (i.e., it does not show cumulative SI/SD). Florida communities that use a similar packet should ensure their materials are consistent with this sample. There is no need to reference this packet in local regulations. The DEM encourages the use of this packet to facilitate administration of the SI/SD requirements.
2. Zone V Design Certificate. The NFIP and FBC both require that a registered professional engineer or architect develop or review the structural design, specifications and plans for buildings in Zone V to certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the requirements. DEM encourages use of this form, which also makes it easier to retain the documentation in the community's permanent records.
3. Agreement to Submit Elevation Certificate. The applicant signs this form to agree to have an Elevation Certificate prepared and submitted twice, which is consistent with the FBC. **Note:** The model ordinance is not written to require use of this agreement; modification to the ordinance would be required to make it mandatory. Contact Technical Support for assistance.
4. Declaration of Land Restriction (Nonconversion Agreement). The applicant signs this form to acknowledge the use limitations for accessory structures and enclosures below elevated buildings and to agree to not block/modify/cover flood openings; to not alter breakaway walls; to not convert the enclosures without a permit; to acknowledge that any alteration constitutes a violation; and to agree to record the declaration on the deed. **Note:** The model ordinance is not written to require use of this declaration/agreement; modification to the ordinance would be required to make it mandatory. Contact Technical Support for assistance.

Elevation Certificate. Communities that are in the NFIP Community Rating System are required to use the NFIP Elevation Certificate. The FBC does not specify use of the NFIP Elevation Certificate, which means documentation of as-built lowest floor elevations may be submitted in a different format. However, use of the Elevation Certificate is recommended. Not only does it provide information in addition to the surveyed elevation, but owners are required to use the NFIP Elevation Certificate to obtain NFIP flood insurance policies. Therefore, it is most cost effective for the owner to have the builder use the Elevation Certificate to satisfy the FBC requirement. The current effective Elevation Certificate is online at <http://www.fema.gov/library/viewRecord.do?id=1383> and the NFIP Floodproofing Certificate is online at <http://www.fema.gov/library/viewRecord.do?id=1600>.

Resources:

DEM offers guidance on the following (under <Other Guidance>)

<http://www.floridadisaster.org/Mitigation/SFMP/Index.htm>

- Additions to Buildings
- Outdoor Kitchens / Pool Equipment
- Anchoring Fuel Tanks

Substantial Improvement / Substantial Damage Desk Reference (FEMA P-758), available online <http://www.fema.gov/library/viewRecord.do?id=4160>

FEMA Technical Bulletins are guidance to help in interpreting, complying, and enforcing the NFIP requirements; available online <http://www.fema.gov/national-flood-insurance-program-2/nfip-technical-bulletins>:

- Openings in Foundation Walls and Walls of Enclosures (2008)
- Flood Damage-Resistant Materials Requirements (2008)
- Non-Residential Floodproofing -- Requirements and Certification (1993)
- Elevator Installation (2010)
- Free-of-Obstruction Requirements (2008)
- Below-Grade Parking Requirements (1993)
- Wet Floodproofing Requirements (1993)
- Corrosion Protection for Metal Connectors in Coastal Areas (1996)
- Design and Construction Guidance for Breakaway Walls Below Elevated Coastal Buildings (2008)
- Ensuring that Structures Built on Fill In or Near Special Flood Hazard Areas are Reasonably Safe From Flooding (2001)
- Crawlspace Construction for Buildings Located in Special Flood Hazard Areas (Interim guidance, 2001)

Explanatory Notes for Model Floodplain Management Ordinance

FPM ORDINANCE SECTION	GUIDANCE NOTES
Whereas clauses	Do not remove.
Section 101 Administration, General	
101.1 Title	
101.2 Scope.	<p>The definition of “development” is very broad. Communities that participate in the NFIP agree to regulate all development. Enforcing the FBC and the model ordinance fulfills the requirements.</p> <p>Note that the scope of this ordinance <u>includes</u> buildings and structures that are exempt from the FBC. Exemption from the building code, even by state law, is not accepted by the NFIP as justification for not regulating such buildings for the purpose of compliance with floodplain management requirements. What it does mean is that a mechanism other than a building permit must be in place. This ordinance establishes that</p>

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	mechanism by requiring compliance with ASCE 24 and by issuance of a floodplain development permit or approval.
101.3 Intent	
101.4 Coordination with the FBC	This is an explicit acknowledgement that the ordinance and the FBC are intended to be enforced together.
101.5 Warning	A statement to this effect has always been part of local floodplain management regulations. The second part of the paragraph contains a warning that if flood maps and flood data change, the community will be required to adopt that revised flood data, which would then have to be enforced in the future.
101.6 Disclaimer of Liability	A statement to this effect has always been part of local floodplain management regulations.
Section 102 Applicability	
102.1 General.	If a community elects to enforce a “more restrictive” provision that affects the design and construction of buildings within the scope of the FBC, that provision must be adopted as a local code amendment. Communities should review section 553.73(5), F.S., to determine whether any such code amendments are not subject to section 553.73(4) – in which case they may not be rendered void when the code is updated (i.e., will not “sunset”). Local technical code amendments that qualify are those adopted for the purpose of participating in the CRS, those that were already adopted prior to July 1, 2010, and those that require additional height above the BFE.
102.2 Areas to which this ordinance applies	
102.3 Basis for establishing flood hazard areas.	<ul style="list-style-type: none"> • Insert the title and date of the FIS. When a “countywide” map is available, the FIS and FIRMs include the unincorporated areas of the county and incorporated areas (e.g., “____ County, Florida and Incorporated Areas”). For municipalities, referencing the countywide FIS and FIRMs means a reference to the FIRM panels (or portions of FIRM panels) that show the area within the boundaries of their municipalities. • Communities may adopt a flood hazard map other than the FIRM provided that map shows flood hazard areas that are larger than the SFHA. Any community that uses another map <u>must</u> modify this section, even if the other flood hazard map is for only a portion of the community (e.g., for only one watershed or a part of a waterway). • Communities that annex area outside the municipal boundaries shown on the current FIRM must notify FEMA (see model ordinance Section 103.8(5)). Annexation may prompt a requirement to adopt a FIRM for the annexed area, if that area is not already shown on a panel adopted by the community. <p>Most Florida communities have an FIS; those that do not should contact DEM for guidance to modify this section.</p>
102.4 Submission of additional data to establish flood hazard areas.	This provision recognizes that topography developed by a licensed professional surveyor for site plans or available from community GIS layers, for example, may be at a finer scale (and thus more accurate) than the base maps used by FEMA to draw the boundary of special flood hazard areas. The best available data should be used, including the best

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	<p>available topographic data, and where there are discrepancies, the SFHA delineation on the best topography should be used.</p> <p>Especially with older FIRMs that were developed using topographic maps with a large contour interval, land that is lower than the BFE may not be shown as in the SFHA. This provision requires use of the best available information (in this case better topography) to delineate the SFHA boundary. There may be some liability if communities know, based on site plans prepared using better data, that areas not delineated on the FIRM but subject to flooding are not regulated.</p> <p>Note also that some land that is higher than the BFE may be shown on the FIRM as in the SFHA (within the shaded dark grey area). Communities are required to regulate the SFHA shown on the FIRMs until and unless FEMA issues an amendment or revision to the map (see the definition of "Letter of Map Change").</p>
102.5 Other laws.	
102.6 Abrogation and greater restrictions.	
102.7 Interpretation.	
Section 103 Duties and Powers of the Floodplain Administrator	
103.1 Designation.	<p>Communities are required to designate one official by position title to enforce the adopted FPM regulations as part of meeting the requirements to participate in the NFIP (designation of multiple staff positions and designation of a department are not permitted). The Floodplain Administrator may be the building official or another position. Sec. 553.73(5), F.S., authorizes designation of local agency other than the building official to be responsible for the enforcement of part or all of the flood provisions of the FBC. Delegation of authority is standard, especially in departments where staff perform functions under the authority of the designated department manager. This authority also allows reviews by other departments where those departments already review or approve certain activities. For example, grading plans may be approved by a public works department; subdivision requests typically are approved by the planning department. Regardless of which department or person performs the work, the Floodplain Administrator has overall responsibility.</p>
103.2 General.	
103.3 Applications and permits.	<p>This section recognizes that communities may have more than one office or department involved in the review of applications for development in flood hazard areas. The responsibilities listed appear in most existing local regulations.</p>
103.4 Substantial improvement and substantial damage determinations.	<p>These responsibilities are not new, although most existing local regulations do not include this level of detail.</p> <p>#1, see the definition of "market value." Note that this item allows the community to use <u>adjusted</u> assessed value or to require submission of an appraisal. If an applicant disputes use of adjusted appraised value, this</p>

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	<p>language then requires the submittal of an appraisal. Communities that want to always require appraisals may modify this language to remove reference to other methods.</p> <p>#4, an important responsibility is to notify the applicant/owner if the work is determined to be SI or SD. Note that this language changes if the community elects to enforce cumulative SI/SD (see Higher Standards).</p> <p>See packet of forms on the DEM website for an up-to-date version of an SI/SD handout used by many Florida communities (based on FEMA's review of several the packets used by Florida communities, those packets are not consistent with the requirements).</p> <p>See DEM Other Guidance: Guidance for Additions to Buildings</p>
103.5 Modifications of the strict application of the requirements of the <i>Florida Building Code</i> .	<p>This section is added because the BOAF Model Administrative Chapter contains a provision that allows the building official to grant such modifications. Depending on the version of BOAF's Model Administrative Chapter used, this provision may not be necessary (check with Technical Support if you're unsure).</p> <p>Communities that do not use the BOAF Model Administrative Chapter do not need this amendment.</p>
103.6 Notices and orders	
103.7 Inspections.	<p>This section has more detail than previous model ordinances. However, the commitment to regulate development in flood hazard areas has an implied commitment to inspect all development, including unpermitted development.</p> <p>The FBC, Building (Sec. 110.3) does not explicitly require a separate "floodplain" inspection, but does require submission of elevation certification two times: (1) upon placement of the lowest floor (and prior to further vertical construction); and (2) as part of the final inspections.</p>
103.8 Other duties of the Floodplain Administrator.	<p>#1 follows the FEMA recommendation to establish procedures for SI/SD to provide uniformity, especially to identify the primary method to establish market value (see FEMA P-758). Communities that could experience widespread flood damage are encouraged to review the Desk Reference and decide in advance how various aspects of dealing with the aftermath will be handled, such as estimating costs and market values.</p> <p>#2 satisfies the NFIP requirements for notifications, but does not obviate the need to obtain any other Federal or State permits that may be required for applications to alter watercourses.</p> <p>#3 applies when the applicant elects to have engineering done to show different boundaries or BFEs, in which case the community can only use the new data if it is approved by FEMA. This is not equivalent to Sec. 102.3.1 which applies in SFHAs without BFEs, in which case the additional data are submitted for unnumbered zones to determine the BFE of the existing SFHA, not to redelineate the SFHA or to refute the BFE.</p>

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	<p>#4 requires the Floodplain Administrator to determine if design certifications and documentation of elevations are complete (e.g., that appropriate fields of the NFIP Elevation Certificate are completed by the surveyor).</p> <p>#6 this item is not required by the NFIP; however, it is important because owners may not realize that NFIP flood insurance is not available on new buildings and SI/SD buildings located in CBRs areas.</p>
103.9 Floodplain management records	<p>Communities make a commitment to the NFIP to retain certain documents in permanent records and to make those records available for public inspection. This commitment overrides any other provision of law that allows disposal of public records after a certain period of time. Also see the Department of State's "General Records Schedule" which specifically identifies retention of documents related to permits and design, with specific provision for NFIP records (#355): http://dlis.dos.state.fl.us/recordsmgmt/gen_records_schedules.cfm.</p>
Section 104 Permits	
104.1 Permits required	
104.2 Floodplain development permits or approvals.	<p>Floodplain development permits or approvals are required for development other than buildings that are within the scope of the FBC. Buildings that are exempt from the FBC are subject to FPM regulations (see comment for Sec. 101.2). Rather than issue a separate floodplain development permit, applications for other permits/approvals may be reviewed and approved for compliance. This section also permits communities to decide whether to issue both a building permit and a separate floodplain development permit/approval for the same activity.</p>
104.3 Buildings, structures and facilities exempt from the <i>Florida Building Code</i> .	<p>See comment for Sec. 101.2. To fulfill the requirements for participation in the NFIP and the commitment to regulate all development, this section recaptures buildings and structures that are exempt from the FBC. Per FEMA, this section cannot be modified or shortened as it is taken from the FBC. In particular, "nonresidential farm buildings on farms" (agricultural structures) may not be removed. See requirements in Sec. 307.1 that apply to such structures. Contact Technical Support for additional guidance. Regulation of buildings exempt from the FBC is accomplished by requiring such buildings to be designed and constructed in accordance with ASCE 24 (see model ordinance Sec. 301.1). Floodplain Administrators may seek advice from the Building Official because compliance with ASCE 24 is equivalent to compliance with the flood provisions of the FBC (seeking consultation is not equivalent to asking the Building Official to issue a permit). The reference to "any further exemptions provided by law" comes from the FBC and is included here to capture any future exemptions which may be passed by the legislature.</p> <p>#9 refers to the exemption added by SB 704 in 2012; a building that is used for hunting that is located in "the 100-year floodplain defined by FEMA" is not exempt from the FBC, and thus has to comply with the flood provisions of the FBC.</p>

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104.4 Application for a permit or approval.	
104.5 Validity of permit or approval.	
104.6 Expiration.	
104.7 Suspension or revocation	
104.8 Other permits required	<p>HB 503 (2012) imposes certain limitations on counties and municipalities regarding issuance of local permits. It allows addition of a condition that is captured by this provision. This section is required by NFIP regulations (44 CFR 60.3(a)(2)). Also see FBC, Building Section 105.3.3 which requires a specific statement regarding additional restrictions and additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.</p> <p>#1, insert the name of the applicable water management district.</p>
Section 105 Site Plans and Construction Document	
105.1 Information for development in flood hazard areas.	<p>As stated in the text below the list in Sec. 105.1, the requirement to have plans drawn to scale may be waived provided the submitted plans and drawings provide sufficient information for evaluation of the proposed project. Greater precision is appropriate if the flood hazard area does not cover an entire lot, if a portion of the lot is in a floodway, or if a parcel is affected by more than one BFE or more than one flood zone.</p> <p># 6 is intended to minimize the placement of fill in flood hazard areas, especially fill that is not intended to support buildings. Because of adverse impacts on flooding, flood hazard areas should not be used to dispose of excess fill. In addition, applicants who intend to fill an area and then seek a map change to “remove” the area from the mapped SFHA should do so as part of the permit which requires proper compaction when the fill is initially placed, not as a subsequent action.</p> <p># 8 is not intended to imply that alteration of sand dunes or mangrove stands is permissible, only that if such activities are allowed by DEP, the flood-damage impacts must be considered pursuant to this ordinance.</p> <p>#9 requires delineation of any channel change (see Sec. 105.3 #3 for other requirements for such proposals).</p> <p>Note that under some circumstances certain required submissions may be waived. The Floodplain Administrator should not waive any requirement that is needed to review a proposal for compliance. For example, this provision would allow sketches for activities that don’t need scaled plans prepared by a registered design professional, such as adding a deck, an addition, interior-only improvements, or building an accessory structure.</p>
105.2 Information in flood hazard areas without base	<p>This provision clarifies that if base flood elevation data are not available from other sources, or if the available data from other sources are not acceptable, item #1 provides the Floodplain Administrator the authority to</p>

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flood elevations (approximate Zone A).	<p>require the applicant to develop data using acceptable methods. The building code gives the code official the same authority.</p> <p>#2 allows use of data from other sources, including the community itself, such as information from nearby permits, local drainage studies, or documentation of past flooding.</p> <p>#3, if data are not available from another source, or the data aren't acceptable, provides the Floodplain Administrator authority to (a) require the applicant to include data; or (b) under very specific circumstances, can specify the depth. This is consistent with NFIP guidance (FEMA 265) that assumes the flooding is shallow in approximate Zone A (sometimes called "unnumbered Zone A"). If an area is known to flood frequently to a depth of 2 ft, it is reasonable to assume that flooding will be deeper during more severe (less frequent) events, in which case another method must be used rather than default to 2-ft. This may be removed by communities that elect to require determinations of BFEs by an engineer.</p> <p>Note that Section 302.2 requires base flood elevation data to be included in subdivision proposals and development proposals containing at least 50 lots or at least 5 acres if the FIRM does not show BFEs.</p>
105.3 Additional analyses and certifications.	<p>#1: floodways are areas where obstructions may divert flow or increase BFEs. FEMA delineates floodways for many waterways by using computer models to estimate the impacts on flood elevations associated with potential development in floodway fringe areas. The floodway boundary is drawn when the computer model determines floodway fringe development would cause the water surface elevation to go up no more than 1 foot.</p> <p>#2 addresses situations where SFHAs are shown <u>with</u> BFEs but <u>without</u> floodways. The potential impact of encroachments has not been evaluated and the NFIP regulations require that hydrologic and hydraulic analysis be performed when applications are submitted (equivalent to delineating a floodway). This requirement is found in NFIP regulations at 44 CFR 60.3(c)(10). Communities should contact DEM for guidance.</p>
105.4 Submission of additional data.	FEMA requires applicants for LOMCs to obtain the community's acknowledgement of the submission.
Section 106 Inspections	
106.1 General.	
106.2 Development other than buildings and structures.	An important part of fulfilling responsibilities to the NFIP is to inspect permitted development, including development other than buildings and structures.
106.3 Buildings, structures and facilities exempt from the FBC.	The Floodplain Administrator inspects buildings, structures and facilities exempt from the FBC.
106.4 Buildings and structures exempt from the FBC, lowest floor inspection.	This section is the same requirement in the FBC Section 110.3 (under "Building," items 1.1 and 5.1). Submission of elevation documents is required upon placement of the lowest floor and prior to further vertical construction, at which time the permittee is required to submit elevation documentation (use of the NFIP Elevation Certificate is recommended; this section may be modified to require use of the NFIP Elevation

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	Certificate).
106.5 Buildings, structures and facilities exempt from the FBC, final inspection.	This section is the same as the FBC, requiring submission of elevation documentation as part of the final inspection. Having the Elevation Certificate in hand allows the inspector to verify compliance and have the data necessary to determine if mechanical and electrical equipment and flood openings are compliant.
106.6 Manufactured homes.	Requirements for installation in flood hazard areas are included in Section 304.
Section 107 Variances and Appeals	
107.1 General.	<p>Variances are official permission to undertake an activity that is otherwise prohibited or not approvable under the regulations or building code. Documentation for each variance considered shall be retained in permanent records (see Section 103.9). A pattern and practice of issuing variances may prompt scrutiny by FEMA and DEM. It is inappropriate to use variances to resolve violations or to attempt to solve problems discovered after construction is completed unless a variance can legitimately be granted after all due consideration.</p> <p>The FBC does not create a board of appeals; the BOAF Admin Code does establish a board of appeals. Florida communities designate a variety of bodies to hear variances: planning and zoning board, board of appeals and adjustments, board of adjustment, city commission, city council, or board of zoning appeals.</p> <p>Sec. 553.73(5), F.S., explicitly states that variances to the flood provisions of the FBC shall not extend to the provisions in Section 3109 for structures seaward of the CCCL.</p>
107.2 Appeals	
107.3 Limitations on authority to grant variances.	
107.4 Restrictions in floodways.	
107.5 Historic buildings.	A determination that improvement of a historic building will not preclude its continued designation as a historic building should be based on documentation provided by a qualified authority, preferably the authority that determined the building meets the criteria for the exception to FBC, EB Section 1201.3.
107.6 Functionally dependent uses.	This section is consistent with NFIP regulations at 44 CFR 60.3(7). Although it allows variances for functionally dependent uses (see definitions) that would allow them below BFE, it does not allow such uses to entirely disregard methods to minimize flood damage.
107.7 Considerations for issuance of variances.	Documentation to support issuance of variances should include technical evaluations, relevant factors, and should address each of the considerations listed.
107.8 Conditions for issuance of variances.	<p>Documentation to support issuance of variances should include documentation of each of conditions listed. For FEMA Guidance on variances, see FEMA P-758 (Section 5.6.7).</p> <p>#3 is not required by the NFIP, but is recommended to inform future owners of the variance.</p>

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Section 108 Violations	
108.1 Violations.	This section applies only to violations of this ordinance; violations of the FBC are dealt with in the code.
108.2 Authority.	
108.3 Unlawful continuance.	
Section 202 Definitions Several terms are noted in brackets as being defined in the FBC, B. These definitions are repeated in this ordinance because they are used in provisions that apply to development that is not within the scope of the FBC. Communities may retain or delete the notes in brackets.	
Alteration of a watercourse	Requirements for alteration of a watercourse apply to riverine (nontidal) waterways (see Section 105.3(3)).
Appeal	
ASCE 24.	The FBC, B refers to ASCE 24, which contains the detailed, specific requirements for buildings and structures in flood hazard areas. The FBC, R requires homes in floodways to comply with ASCE 24 and allows ASCE 24 as an alternative in Zone V. See “Highlights of ASCE 24” prepared by FEMA, available http://www.floridadisaster.org/Mitigation/SFMP/lobc_resources.htm
Base flood.	
Base flood elevation.	
Basement.	The NFIP definition of “Basement” is consistent with the building code definition in Sec. 202 (the FBC, B also defines “basement” in Sec. 502.1). In addition, this definition is consistent with its usage in the FBC, R provisions that apply in flood hazard areas (see R322.1.5, R322.2.1 and R322.3.2).
Coastal construction control line.	
Coastal high hazard area.	
Design flood.	<p>The design flood is either the base flood or another flood based on other criteria. A community may choose to prepare and adopt flood hazard maps that show flood hazard areas that are not on maps prepared by FEMA. These may be areas that FEMA did not study or areas that were studied with different criteria. For example, as a general rule, FEMA is concerned primarily with flooding sources that have a drainage area of 1 square mile or more. For another example, some communities elect to prepare flood hazard maps based on the assumption that the upland watershed is built out to existing zoning, often called "ultimate development," and sometimes the “flood of record” is the basis for regulation.</p> <p>The majority of Florida’s communities use the FIRM; therefore, the design flood equals the base flood.</p>
Design flood elevation.	<p>The majority of Florida’s communities use the FIRM; therefore, the design flood elevation equals the base flood elevation.</p> <p>In Zone AO, this definition specifies use of the depth number or 2 ft. If the community elects to add additional height elsewhere (freeboard), consideration should be given to specifying that the minimum depth number should be at least 2 feet plus the additional height (e.g., 3 feet if</p>

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	the community adopts 1 ft of freeboard).
Development.	
Encroachment.	
Existing building and existing structure.	<p>See note above regarding the adoption date of the community's first floodplain management ordinance.</p> <p>The common label for "existing buildings" is "pre-FIRM" (built before the FIRM), and the comparable label for "new construction" is "post-FIRM" (built after the FIRM). However, those labels are really intended for flood insurance purposes and are not permitted in FPM regulations.</p> <p>Now that many Florida communities have been in the NFIP for 20-30 years, it is somewhat awkward to refer to buildings that old as "new." Although there is a difference in the wording of this definition and the FBC definition, there is no practical difference. The NFIP considers any building built after the specified date to be "new construction" and expects communities to ensure that any work performed on such new construction/existing buildings will not alter or modify any aspect of that building that was required for compliance with the floodplain management requirements in effect when it was built. This same concept is in the codes.</p>
Existing manufactured home park or subdivision.	See Higher Standards if the community elects to treat all MFHs the same.
Expansion to an existing manufactured home park or subdivision.	See Higher Standards if the community elects to treat all MFHs the same.
Federal Emergency Management Agency (FEMA).	
Flood or flooding	
Flood damage-resistant materials.	
Flood hazard area.	This term refers to (1) the mapped Special Flood Hazard Area shown on FIRMs, and (2) a larger area if the community adopts another map or legally designates an area. The majority of Florida's communities use the FIRM; therefore, the flood hazard area equals the special flood hazard area.
Flood Insurance Rate Map (FIRM).	<p>Revised FIRMs that have been prepared in digital format or converted to digital format are referred to as Digital FIRMs (DFIRM). The term "Flood Insurance Rate Map (FIRM)" refers to flood hazard data provided by FEMA, regardless of whether the data are shown on printed products or in digital format.</p> <p>DEM will help communities that have Flood Boundary and Floodway Maps to modify the model to appropriately reference that map.</p>
Flood Insurance Study (FIS).	
Floodplain Administrator.	
Floodplain development permit or approval.	If approval is signaled as part of another form of permit or approval, the community should keep a record of that approval. Some Florida communities use a stamp that allows the Floodplain Administrator to indicate and date concurrence.

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Floodway.	
Floodway encroachment analysis	
<i>Florida Building Code.</i>	The Florida Building Code (FBC) is a family of codes. FBC, B is the building code; FBC, R is the residential code; FBC, EB is the existing building code; the family also includes mechanical, plumbing, and fuel gas codes. The FBC includes flood provisions that FEMA has determined to be consistent with the NFIP requirements for buildings and structures; see especially Sec. 1612 (building), R322 (residential), and FBC, EB. The term “building code” is used to refer to all of the codes.
Functionally dependent use.	
Highest adjacent grade.	
Historic structure.	
Letter of Map Change (LOMC)	
Light-duty truck	
Lowest floor.	
Manufactured home.	This definition is modified to incorporate the NFIP definition and phrasing from the definition in 15C-1.0101, F.A.C. Units that are called “park trailers,” “park models” or “HUD RVs” are treated as recreational vehicles.
Manufactured home park or subdivision.	
Market value.	The alternatives to establish market value are described in <i>Substantial Improvement/Substantial Damage Desk Reference</i> (FEMA P-758). Communities should decide which method to use and apply it consistently. If a method other than a professional appraisal is selected as the standard method, applicants can be given the option to provide an appraisal. Communities that elect to always require the applicant to provide a professional appraisal may modify this definition. Documentation of the factor (multiplier) provided by the Property Appraiser should be kept with permit records and should be verified annually.
New construction.	See note above regarding the adoption date of the community’s first floodplain management ordinance.
New manufactured home park or subdivision.	See note above regarding the adoption date of the community’s first floodplain management ordinance.
Park trailer.	This definition is found in section 320.01, F.S.
Recreational vehicle.	“Park trailers” is added to the NFIP definition; these units are treated as RVs and, just like RVs, if they do not conform to the requirements for RVs, then they must be treated as manufactured homes.
Sand dunes.	
Special flood hazard area.	
Start of construction.	
Substantial damage.	For guidance, see <i>Substantial Improvement/Substantial Damage Desk Reference</i> (FEMA P-758).
Substantial improvement.	For guidance, see <i>Substantial Improvement/Substantial Damage Desk Reference</i> (FEMA P-758). Communities that elect to handle historic structures by variance (see Section 107.5) should remove item (2). The benefit of handling by

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	variance is the requirement that variances be the minimum necessary, which provides the opportunity to require some measures to minimize future flood damage. This approach is consistent with the overall intent of preserving cultural and historic resources.
Variance.	
Watercourse.	
Section 301 Buildings and Structures	
301.1 [Buildings and Structures] Design and construction of buildings, structures and facilities exempt from the FBC.	See Section 1043. Walled and roofed buildings are required to comply with ASCE 24; non-building structures are required to comply with Section 307, which has general performance expectations (e.g., anchored to prevent flotation/debris).
301.2 Buildings and structures seaward of the coastal construction control line.	DEM and the Florida Building Commission have identified a collaborative initiative to resolve the inconsistencies between CCCL and Zone V requirements (anticipated in the FBC 6 th edition). Until the inconsistencies are resolved in the FBC, building officials have to do it on a case-by-case basis; in doing so, the more restrictive of the two sets of requirements must be enforced.
Section 302 Subdivisions	
302.1 Minimum requirements.	
302.2 Subdivision plats.	
Section 303 Site Improvements, Utilities and Limitations	
303.1 Minimum requirements.	Although these requirements are the same as Section 302.1, here they apply to developments other than subdivisions.
303.2 Sanitary sewage facilities.	
303.3 Water supply facilities.	
303.4 Limitations on sites in regulatory floodways.	This is a key provision that is referenced in several other sections. The requirement is that development be prohibited in floodways unless an analysis demonstrates the encroachment will not increase base flood elevations.
303.5 Limitations on placement of fill.	Fill may be placed to support buildings or for other purposes. These provisions for fill placed to elevate buildings come from ASCE 24, a standard that is referenced in the building code. The building code also includes requirements in 1803.5.8 and R401 (fill soils) and R506 (concrete floors on ground). The ASTM Standard D-698 <i>Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort</i> may be referenced.
303.6 Limitations on sites in coastal high hazard areas (Zone V).	
Section 304 Manufactured Homes	
304.1 General.	As with other structures, manufactured homes that are in SFHAs and <u>also</u> seaward of the CCCL are required to comply with the more restrictive requirements.
304.2 Foundations.	See <i>Protecting Manufactured Homes from Floods and Other Hazards</i> (FEMA P-85) http://www.fema.gov/library/viewRecord.do?id=1577 .

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	<p>FEMA P-85 includes a number of pre-engineered foundation solutions that take into account both flood loads and wind loads.</p> <p>Sec. 304.6 permits certain MFHs in existing parks/subdivisions that were established before the date the community joined the NFIP to be placed, replaced, or substantially improved without full elevation, provided a home on the site was not substantially damaged by flooding. In these existing parks/subdivisions, homes may be on reinforced piers or other foundation elements of at least equivalent strength. For “dry stack block” piers, equivalent strength can be provided by cross bracing and diagonal straps and ground anchors that provide adequate resistance to flooding when soils are saturated (also see FEMA P-85).</p>
304.3 Anchoring.	
304.4 Elevation.	FEMA revised its manufactured home installation guidance document (FEMA P-85) to refer to the bottom of the lowest horizontal supporting member (longitudinal chassis frame beam) as the reference level. DEM will request that Department of Highway Safety and Motor Vehicles update the rule at 15C-1, F.A.C., to refer to FEMA P-85 (revised in 2009).
304.5 General elevation requirement.	
304.6 Elevation requirement for certain existing manufactured home parks and subdivisions.	Communities that do not want to allow certain replacement MFHs to be installed below the BFE on foundations that are at least 36” above grade should see Higher Standards.
304.7 Enclosures.	
304.8 Utility equipment.	
Section 305 Recreational Vehicles and Park Trailers	
305.1 Temporary placement.	
305.2 Permanent placement.	
Section 306 Tanks This section is consistent with 2015 IRC and ASCE 24-14.	
306.1 Underground tanks.	The NFIP definition of “development” is broad and includes tanks. Floodplain management regulations have always covered tanks. This model includes specific provisions so that neither the applicant nor the local official has to figure out what is necessary to comply with the general performance expectation.
306.2 Above-ground tanks, not elevated.	
306.3 Above-ground tanks, elevated	
306.4 Tank inlets and vents.	
Section 307 Other Development This section is consistent with 2015 IRC and ASCE 24-14.	
307.1 General requirements for other development.	<p>The NFIP definition of “development” is broad and includes the “other development” listed in this section. This model includes specific provisions so that neither the applicant nor the local official has to figure out what is necessary to comply with the general performance expectation.</p> <p>FEMA Technical Bulletin #5 includes both general guidance and specific</p>

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	guidance for some types of development in coastal high hazard areas (Zone V).
307.2 Fences in regulated floodways.	
307.3 Retaining walls, sidewalks and driveways in regulated floodways.	
307.4 Roads and watercourse crossings in regulated floodways.	
307.5 Concrete slabs used as parking pads, enclosure floors, landings, decks, walkways, patios and similar nonstructural uses (Zone V).	
307.6 Decks and patios in coastal high hazard areas (Zone V).	
307.7 Other development in coastal high hazard areas (Zone V).	
307.8 Nonstructural fill in coastal high hazard areas (Zone V).	The description of the uses and “minor” quantities of fill are the same as specified in the FBC, R. Although a specific volume is not defined, the nature and purposes for which minor grading and quantities of fill may be used are sufficient to place bounds on proposals. FEMA Technical Bulletin #5 suggests that the placement of up to 2 feet of site-compatible, non-structural fill under or around an elevated building can be assumed to be acceptable. The placement of fill (and structures such as retaining walls) can deflect waves and divert flood flows which may damage buildings. The language in #2 and #3 comes from NFIP Technical Bulletin 5-08. Note that any proposal for dune construction or restoration of dunes must be approved by DEP or the applicable local reviewing agency before considering the proposal under this ordinance.