



NFIP Checklist

Version Three: Model Code-Coordinated Ordinance

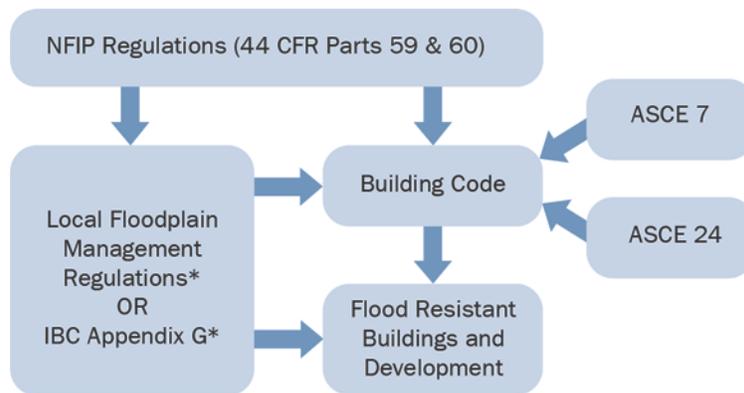
Purpose of the National Flood Insurance Program (NFIP) Checklist. This checklist illustrates how Version Three of the Model Code-Coordinated Ordinance, combined with the International Codes® (I-Codes) and the referenced standard, ASCE 24-14 *Flood Resistant Design and Construction*, either meet or exceed the NFIP requirements for the purpose of NFIP participation. satisfies the requirements of the NFIP.

Version Three assumes (1) there are no changes to the flood provisions in the bodies of the I-Codes that weaken those flood provisions, (2) Chapter 1 (administrative provisions) of the I-Codes *is not* adopted, (3) International Building Code (IBC) Appendix G *is not* adopted, and (4) the provisions for all flood zones (i.e., zones that start with “A” and “V”) are applicable.

The checklist is based on the standard checklist used by FEMA and states to review local floodplain management regulations/ordinances to determine whether the regulations/ordinances are complete for the purpose of participating in the NFIP. Pertinent Federal regulations are in 44 CFR Part 60 (criteria for land management and use) and 44 CFR Section 59.1 (definitions).

Although the checklist references the 2018 I-Codes, the checklist can also be used for the 2015 and 2012 editions. However, note that some flood provisions changed between each edition. Download excerpts of the flood provisions from the FEMA Building Science Code Resources Web page at <http://www.fema.gov/building-code-resources>.

Floodplain Management and Building Codes. With the inclusion of provisions that meet or exceed the NFIP criteria for buildings in the I-Codes, states and communities have two primary tools for regulating development in flood hazard areas: (1) building codes that govern the design and construction of buildings and structures and (2) local floodplain management regulations that are coordinated with the I-Codes (including IBC Appendix G when it is adopted). These tools are designed to work together to result in buildings, structures, and all other development that are resistant to flood loads and flood damage.



* NFIP-consistent administrative provisions, community-specific adoption of Flood Insurance Studies and maps, and technical requirements for development outside the scope of the building code (and higher standards, in some communities).

Organization of the Checklist: The checklist has two sections: NFIP requirements and NFIP definitions.

In the NFIP requirements section:

- The left column contains a short description of the requirement and a citation of the source of the requirement in the Code of Federal Regulations (44 CFR).
- The middle column, “Model Ordinance (Version Three),” shows the sections of the Model Ordinance that satisfy the NFIP requirements (other than those found in the I-Codes).
- The right column shows the 2018 I-Codes and ASCE 24-14 sections that govern buildings and structures in flood hazard areas.

The NFIP definitions start on page 13.

Acronyms used in the Checklist:

ASCE	American Society of Civil Engineers
BFE	base flood elevation
Dfn	Definition
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
IBC	International Building Code
IEBC	International Existing Building Code
IFGC	International Fuel Gas Code
IMC	International Mechanical Code
IPC	International Plumbing Code
IRC	International Residential Code
MH	manufactured home
MO	model ordinance
NFIP	National Flood Insurance Program
SFHA	Special Flood Hazard Area

NFIP Requirements: Version Three Model Ordinance, 2018 I-Codes, and ASCE 24-14

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
1. Citation of Statutory Authorization. [59.22(a)(2)]	Whereas clause	In ordinance
2. Purpose section citing health, safety, and welfare reasons for adoption. [59.22(a)(1)]	MO: 101.3	IBC: 101.3 IRC: R101.3 IEBC: EB101.3
3. Definitions [59.1]	See below	See below
4. Adopt or reference correct Flood Insurance Study and Flood Insurance Rate Map (and where applicable, Flood Boundary Floodway Map) and date. [60.2(h)]	MO: 102.2; 102.3	IBC: 1612.3 IRC: Table R301.2(1) Note: both reference revisions of FIS and FIRMs; this provision does not override individual state limitations on “auto-adoption” of maps.
5. Adequate enforcement provisions including a violations/penalty section specifying community actions to ensure compliance. [60.2(e)]	MO: 104; 106; 107	IBC: 114 IRC: R113
6. Abrogation and Greater Restriction section (provide that floodplain management regulations take precedence over any less restrictive conflicting local laws, ordinances or codes). [60.1(b)]	MO: 101.6; 101.8	In ordinance
7. Disclaimer of Liability (Degree of flood protection required by the ordinance is considered reasonable but does not imply total flood protection.)	MO: 101.5	In ordinance
8. Severability section. (If any section, provision or portion of the ordinance is deemed unconstitutional or invalid by a court, the remainder of the ordinance shall be effective.)	Whereas clause	In ordinance
9. Framework for administering the ordinance (permit system, establish office for administering the ordinance, recordkeeping, etc.) [59.22(b)(1)]	MO: 103; 104	IBC Chapter 1 IRC: Chapter 1; R104 IEBC: Chapter 1; EB104

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
10. Designate title of community Floodplain Administrator [59.22(b)(1)]	MO: 103.1	IBC: 104.1 IRC: R104.1
11. Requirement to submit new technical data: within 6 months, notify FEMA of changes in the base flood elevation by submitting technical or scientific data so insurance & floodplain management can be based on current data. [65.3]	MO: 103.4(9); 103.5	In ordinance
12. Variance section with evaluation criteria & insurance notice. [60.6(a)]	MO: 107	IBC: 104.10.1 IRC: R104.10.1 IEBC: EB104.10.1
13. For adopted ordinance: Signature of Appropriate Official & Certification. [59.22(a)(3)] Date ordinance adopted: __ Effective Date__ Ord. # _____	Signature block	In ordinance
60.3(a) When no SFHAs have been identified, no water surface elevation data has been provided, and floodways and coastal high hazards areas have not been identified and the community applies for participation in the NFIP, the following are required:	Model Ordinance (Version Three)	I-Codes/ASCE 24-14
14. Require permits for all proposed construction or other development including placement of manufactured homes. [60.3(a)(1)]	MO: 101.2; 102.1; 104.1; 301 (subdivisions and other developments); 401 (site improvement); 501 (manufactured homes); 601 (recreational vehicles); 701 (tanks); 801 (accessory strs & other); 901 (temp strs/storage); 1001(utility & misc use group U)	IBC: 101.2; 105.1; 105.2 IRC: R101.2; R102.7; R105.1; R105.2; R105.3.1.1; R106.1.3; R301.2.4; R322 IEBC: EB101.2; EB105.1
15. Assure that all other State and Federal permits are obtained. [60.3(a)(2)]	MO: 103.6	IBC: 102.2 IRC: R102.2

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
16. Review permits to assure sites are reasonably safe from flooding and require performance for new construction and substantial improvements in flood-prone areas: [60.3(a)(3)]	MO: 101.5; 103.4	IBC: 107.2.5; 1612.1; 1804.4(1) IRC: R106.1.3; R301.1; R301.2.4; R322 IEBC: EB501.3; EB506.2.4; EB401.3; EB501.3; EB506.2.4; EB601.3; EB701.2; EB801.3; EB1003.5; EB1101.3.5; EB1202.6; EB1301.3.3 (all by reference to IBC 1612)
(a) Anchoring (including manufactured homes) to prevent floatation, collapse, or lateral movement. [60.3(a)(3)(i)]	MO: 501.4; 701.1; 801.1(3); 901; 1001.2	IBC: 1603.1; 1603.1.7; 1605.2.2; 1605.3.1.2; 1612.1; 1612.2 (ASCE 24) ASCE 24: 1.5.1; 1.5.3; 1.5.5; 1.6; 2.4; 2.5; 4.5; 7.1; 7.4; 7.5; Chapter 9 IRC: R301.1; R301.2.4; R322.1.2; R322.1.9; R322.2; R322.3 IEBC: by reference to IBC 1612 and R322 (see sections listed in Row 18)
(b) Use of flood-resistant materials. [60.3(a)(3)(ii)]	MO: 501.5; 801.1(4); 1001.5	IBC: 802.45; 1403.6; 1612.2 (ASCE 24) ASCE 24: 1.5.1; Chapter 5; 6.2; 6.3; 7.5; 8.1; 9.1 IRC: R322.1.8 IEBC: by reference to IBC 1612 and R322 (see sections listed in Row 18)
(c) Construction methods/practices that minimize flood damage. [60.3(a)(3)(iii)]	MO: 103.4(2); 301.1(1), 401, 501; 601, 701, 801, 901, 1001	IBC: 1612.1. 1612.2 (ASCE 24) ASCE 24 as a whole IRC: R322.1.3 IEBC: by reference to IBC1612 and R322 (see sections listed in Row 18)

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
(d) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities designed and/or located to prevent water entry or accumulation. [60.3(a)(3)(iv)]	MO: 501.6; 701.1; 801.1(5); 1001.6	IBC: 1612.2 (ASCE 24); 3001.2; also see IMC, IPC, IFGC ASCE 24: 4.6.1; Section 7 IRC: R322.1.6; R322.2.4; R322.3.10; RM1301.1.1; RM1401.5; RM1601.4.9; RM1701.2; RM2001.4; RM2201.6; RG2404.7; RP2601.3; RP2705.1; RP3001.3; RP3101.5 IEBC: by reference to IBC 1612 and R322 (see sections listed in Row 18)
17. Review subdivision proposals and development proposals to assure that: (a) Such proposals minimize flood damage. [60.3(a)(4)(i)]	MO: 301.1(1)	In ordinance
(b) Public utilities and facilities are located & constructed so as to minimize flood damage. [60.3(a)(4)(ii)]	MO: 301.1(2); 401	In ordinance
(c) Adequate drainage is provided. [60.3(a)(4)(iii)]	MO: 301.1(3); 401.5	IBC: 1804.3 ASCE 24: 1.4.2; 4.5.4 IRC: R401.3
18. Require new and replacement water supply and sanitary sewer systems to be designed to minimize or eliminate infiltration. [60.3(a)(5) & (6)]	MO: 301.1(2); 401.3; 401.4	ASCE 24: 7.3 IRC: R322.1.7; RP2602.2(1)
19. Require on-site waste disposal systems be located to avoid impairment or contamination. [60.3(a)(6)(ii)]	MO: 401.3	ASCE 24: 7.3.4 IRC: R322.1.7; RP2602.2(2)

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
60.3(b) When SFHA's are identified by the publication of a community's FHBM or FIRM, but water surface elevation data have not been provided or a floodway or coastal high hazard area has not been identified, then all the above ordinance provisions for 60.3(a) and the following are required:	Model Ordinance (Version Three)	I-Codes/ASCE 24
20. Require permits for all proposed construction and other development within SFHAs on the FIRM. [60.3(b)(1)]	MO: 101.2; 102.1; 104.1; 301; 401; 501; 601; 701; 801; 901; 1001	Buildings only: IBC 101.2 (see exemptions); 105.1; 1612.1 1- & 2-family homes and townhomes only: R101.2; R322.1 IEBC: EB101.2
21. Require base flood elevation data for subdivision proposals or other developments greater than 50 lots or 5 acres. [60.3(b)(3)]	MO: 103.7; 105.1(3); 301.2	In ordinance
22. In A Zones, in the absence of FEMA BFE data and floodway data, obtain, review and reasonably utilize base flood elevation and floodway data available from available from a Federal, State, or other source as criteria for requiring new construction, substantial improvements, or other development in Zone A as the basis for elevating residential structures to or above base flood level, for floodproofing or elevating nonresidential structures to or above base flood level, and for prohibiting encroachments in floodways. [60.3(b)(4)]	MO: 103.7; 105.2	IBC: 1612.3.1; 1612.3.2 IRC: R106.3.1.1; R322.1.4.1
23. Where BFE data are utilized, obtain and maintain records of lowest floor and floodproofing elevations for new construction and substantial improvements. [60.3(b)(5)]	MO: 103.13	IBC: 104.7; 110.3.3; 110.3.10.1; 1612.4(1.1), (1.3) and (2.1) IRC: R104.7; R106.1.3(4); R109.1.3; R109.1.6.1; R322.1.10 IEBC: EB104.7; EB109.3.3
24. In riverine areas, notify neighboring communities of watercourse alterations or relocations. [60.3(b)(6)]	MO: 103.10	In ordinance
25. Maintain flood carrying capacity of altered or relocated watercourse. [60.3(b)(7)]	MO: 103.10.1	In ordinance

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
26. Require all manufactured homes to be elevated and anchored to resist flotation, collapse, or lateral movement. [60.3(b)(8)]	MO: 501	Permanent foundations are structures that may be subject to IBC/ASCE 24. IRC: R322.1.9
60.3(c) When final flood elevations, but no floodways or coastal high hazard areas have been provided on a community's FIRM, then all the above ordinance provisions for 60.3(a) & 60.3(b) and the following are required:	Model Ordinance (Version Three)	I-Codes/ASCE 24
27. Require all new and substantially improved <u>residential</u> structures within A1-30, AE, and AH Zones have their lowest floor (including basement) elevated to or above the BFE. [60.3(c)(2)]	In building code	IBC: 104.2.1; Dfn DFE; 1612.1; 1612.2 (ASCE 24); 1612.4(1.1); 1804.4(1) ASCE 24: 1.5.2; 2.3 (specification of flood depth in ordinance/code) IRC: R105.3.1.1; R301.2.4; R322.1.5; R322.1.10; R322.2.1; R322.2.1(3); R408.7 IEBC: EB104.2.1; by reference to IBC 1612 and R322 (see sections listed in Row 18)
28. In AO Zones, require that new and substantially improved <u>residential</u> structures have their lowest floor (including basement) at or above the highest adjacent grade at least as high as the FIRM's depth number. [60.3(c)(7)]		
29. Require that new and substantially improved <u>nonresidential</u> structures within A1-30, AE, and AH Zones have their lowest floor elevated or floodproofed to or above the base flood elevation. [60.3(c)(3)]	In building code	IBC: 104.2.1; Dfn DFE; 1612.1; 1612.2 (ASCE 24); 1612.4(1.3) ASCE 24: 1.5.2; 2.3; Section 6 (specification of flood depth is done in administrative provisions) IEBC: EB104.2.1; by reference to IBC 1612 and R322 (see sections listed in Row 18)
30. In AO Zones, require new and substantially improved <u>nonresidential</u> structures have their lowest floor elevated or completely floodproofed above the highest adjacent grade to at least as high as the depth number on the FIRM. [60.3(c)(8)]		
31. Require that, for floodproofed <u>nonresidential structures</u> , a registered professional/architect certify that the design and methods of construction meet requirements at (c) (3) (ii) or (c)(8)(ii). [60.3(c)(4)]	In building code	IBC: 1612.4(1.3) IEBC: by reference to 1612 and R322

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
<p>32. Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access or storage have permanent openings designed to allow the entry and exit of flood waters in accordance with specifications of 60.3(c)(5).</p>	<p>In building code</p>	<p>IBC: 104.2.1; 1612.2 (ASCE 24); 1612.4(1.2) (engineered openings) ASCE 24: 1.5.2; 2.6 IRC: R309.3; R322.2.2; R322.2.2.1; R322.3.5; R408.7 IEBC: EB104.2.1; by reference to IBC 1612 and R322 (see sections listed in Row 18)</p>
<p>33. Within Zones A1-30 and AE without a designated floodway, new development shall not be permitted unless it is demonstrated that the cumulative effect of all past and projected development will not increase the BFE by more than 1 foot. [60.3(c)(10)]</p>	<p>MO: 103.8</p>	<p>IBC: 1612.3.2; 1804.4(4) ASCE 24: 2.2 IRC: R106.1.3; R322.1.4.2</p>
<p>34. In Zones AO and AH, require drainage paths around structures on slopes to guide water away from structures. [60.3(c)(11)]</p>	<p>MO: 301.1(3); 401.5</p>	<p>IBC: 1804.4 IRC: R401.3</p>
<p>35. Require that manufactured homes placed or substantially improved within A1-30, AH, and AE Zones, which meet one of the following location criteria, to be elevated such that the lowest floor is at or above the BFE and be securely anchored:</p> <ul style="list-style-type: none"> i. outside a manufactured home park or subdivision; ii. in a new manufactured home park or subdivision; iii. in an expansion to an existing manufactured home park or subdivision; iv. on a site in an existing park which a manufactured home has incurred substantial damage as a result of flood. [60.3(c)(6)] 	<p>MO: 501 (all MH, regardless of location)</p>	<p>IRC: R322.1.9 If the foundation for MH unit is subject to ASCE 24, it would be subject to same elevation, foundation and enclosure requirements as residential/Flood Design Class 2 structures.</p>
<p>36. In A1-30, AH, and AE Zones, require that manufactured homes to be placed or substantially improved in an <u>existing</u> manufactured home park to be elevated so that:</p> <ul style="list-style-type: none"> i. the lowest floor is at or above the BFE <i>or</i> ii. the chassis is supported by reinforced piers no less than 36 inches above grade and securely anchored. [60.3(c)(12)] 	<p>MO: 501 (36" option not provided)</p>	<p>IRC: R322.1.9 (36" option not provided; per ASCE 24 if in floodway) If the foundation for MH unit is subject to ASCE 24, it would be subject to same elevation, foundation and enclosure requirements as residential/Flood Design Class 2 structures.</p>

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
37. In A1-30, AH, and AE Zones, all recreational vehicles to be placed on a site must be elevated and anchored <u>or</u> be on the site for less than 180 consecutive days <u>or</u> be fully licensed and highway ready. [60.3(c)(14)]	MO: 601 (not authorized in coastal high hazard areas and floodways)	In ordinance
60.3(d) When final flood elevations and floodway delineations have been provided on a community's FIRM, then all the above ordinance provisions for 60.3(a), 60.3(b) & 60.3(c) and the following are required:	Model Ordinance (Version Three)	I-Codes/ASCE 24
38. In a regulatory floodway, prohibit any encroachment which would cause any increase in the base flood level unless hydrologic and hydraulic analyses prove that the proposed encroachment would not increase flood levels during the base flood discharge. [60.3(d)(3)]	MO: 103.9; 103.9.1; 105.3(1); 401.1; 801.1(2); 801.3; 801.6; 801.4	IBC: 1612.2 (ASCE 24); 1804.4(2) ASCE 24: 2.2 IRC: R106.1.3; R301.2.4; R322.1 (per ASCE 24)
60.3(e) When final flood elevations & coastal high hazard areas have been provided on a community's FIRM, then all the above ordinance provisions for 60.3(a), 60.3(b) & 60.3(c) & the following are required: NOTE: If a community has both floodways & coastal high hazard areas, it must meet the requirements of both 60.3(d) & (e).	Model Ordinance (Version Three)	I-Codes/ASCE 24
39. In V1-30, VE, and V Zones, obtain and maintain the elevation of the bottom of the lowest <i>horizontal</i> structural member of the lowest floor of all new and substantially improved structures. [60.3(e)(2)]	In building code	IBC: 110.3.3; 110.3.10.1; 104.7; 1612.4(2.1) IRC: R104.7; R109.1.3; R109.1.6.1; R322.1.10 IEBC: by reference to IBC 1612 and R322 (see sections listed in Row 18)

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
<p>40. In V1-30, VE, and V Zones, require that all new construction and substantial improvements:</p> <p>(a) Are elevated on pilings/columns so that the bottom of the lowest horizontal structural member is at or above the BFE and the piles/column foundation/structure are anchored to resist flotation, collapse & lateral movement due to the effects of wind and water loads acting simultaneously. [60.3(e)(4)]</p>	In building code	IBC: 104.2.1; 1612.1; 1612.2 (ASCE 24) ASCE 24: 1.5.2; 1.5.3; 1.6; 4.2; 4.4; 4.5; Chapter 9 IRC: R322.3; R322.3.2; R322.3.3 IEBC: EB104.2.1; by reference to IBC 1612 and R322 (see sections listed in Row 18)
<p>(b) A registered professional engineer/architect shall develop/review structural design, specs & plans; and shall certify that the design and methods of construction meet elevation and anchoring requirements at (e)(4)(i) and (ii). [60.3(e)(4)]</p>	In building code	IBC: 1612.4(2.2) IRC: R322.3.3; R322.3.9 IEBC: by reference to IBC 1612 and R322
<p>(c) Have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls. Such enclosed space shall be useable solely for parking, building access, or storage. [60.3(e)(5)]</p>	In building code	IBC: 1403.6; 1612.2 (ASCE 24); 1612.4(2.3); 1804.4(3) ASCE 24: 4.5.1; 4.5.4; 4.6 IRC: R322.3.2; R322.3.3; R322.3.4; R322.3.5; R322.3.6; R322.3.7; R322.3.8 IEBC: by reference to IBC 1612 and R322 (see sections listed in Row 18)
<p>(d) All new construction is landward of the reach of mean high tide. [60.3(e)(3)]</p>	MO: 401.2	IBC: 1612.4 (ASCE 24) ASCE 24: 4.3(1) IRC: R322.3.1(1)
<p>(e) Prohibit use of fill for structural support. [60.3(e)(6)]</p>	MO: 401.2(2)	IBC: 1612.2 (ASCE 24) ASCE 24: 4.5.4 IRC: R322.3.2(3) IEBC: by reference to IBC 1612 and R322
<p>(f) Prohibit alteration of sand dunes and mangrove stands which would increase potential flood damage. [60.3(e)(7)]</p>	MO: 103.11; 401.8	IBC: 1612.2 (ASCE 24) ASCE 24: 4.3(3); 4.5.4 IRC: R322.3.1(2)

Required Provisions [NFIP citations]	Model Ordinance (Version Three)	I-Codes / ASCE 24
<p>41. Require that manufactured homes placed or substantially improved within V1-30, VE, and V Zones, which meet one of the following location criteria, meet the V Zone standards in 60.3(e)(2) through (e)(7):</p> <ul style="list-style-type: none"> i. outside a manufactured home park or subdivision; ii. in a new manufactured home park or subdivision; iii. in an expansion to an existing manufactured home park or subdivision; iv. on a site in an existing park which a manufactured home has incurred substantial damage as a result of flood. [60.3(e)(8)] 	<p>MO: 501.2 (all MH, regardless of location)</p>	<p>IRC: R322.1.9 If the foundation for MH unit is subject to ASCE 24, it would be subject to same elevation, foundation and enclosure requirements as residential/Flood Design Class 2 structures.</p>
<p>42. In V1-30, VE and V Zones, require that manufactured homes to be placed or substantially improved in an <u>existing</u> manufactured home park to be elevated so that:</p> <ul style="list-style-type: none"> i. the lowest floor is at or above the BFE, <u>or</u> ii. the chassis is supported by reinforced piers no less than 36 inches above grade and securely anchored. [60.3(e)(8)(iv); 60.3(c)(12)] 	<p>MO: 501.2 (36" option not provided)</p>	<p>IRC: R322.1.9 (36" option not provided) If the foundation for MH unit is subject to ASCE 24, it would be subject to same elevation, foundation and enclosure requirements as residential/Flood Design Class 2 structures.</p>
<p>43. In V1-30, VE, and V Zones, all recreational vehicles to be placed on a site must be elevated and anchored <u>or</u> be on the site for less than 180 consecutive days <u>or</u> be fully licensed & highway ready. [60.3(e)(9)]</p>	<p>MO: 601.1 (not permitted in coastal high hazard areas)</p>	<p>In ordinance</p>

NFIP Definitions: Version Three Model Ordinance, 2018 I-Codes, and ASCE 24-14

Version Three Model Ordinance explicitly states that terms not defined in the ordinance are defined in the Building Code and used in the Residential Code.

IBC 202 includes definitions. IBC 201.3 states that terms not defined in the IBC may be defined in the IFGC, IFC, IMC, or IPC; and IBC 201.4 states that terms not defined “shall have ordinarily accepted meanings such as the context implies.”

The IRC “defines” many terms where they are used, rather than separate definitions in Section R202. Also, IRC R201.3 specifies that terms not defined in IRC have meaning in other codes (i.e., IBC); and IRC R201.4 repeats that terms not defined in IRC or other codes “shall have ordinarily accepted meanings such as the context implies.”

The IEBC also defines addition, alteration, rehabilitation, repair—some of those terms (and others) are used in the definition of substantial improvement.

Definitions Pertinent to Regulating FHAs	In 44 CFR § 59.1	Version Three Model Ord	IBC/ASCE 24 section ¹	IRC section	IEBC section ²	Notes
500-year flood elevation	No	No	ASCE 24 1.2	No	No	See ASCE 24 Flood Design Class 4
Alteration of a watercourse	No	Yes	No	No	No	None
ASCE 24	No	Yes	No	No	No	None
Base flood	Yes	No	202; ASCE 24 1.2	No	No	None
Base flood elevation	No	No	202; ASCE 24 1.2	R322.1.4	No	None
Basement	Yes	No	202; ASCE 24 1.2	R322.2.1	No	IRC usage conveys definition

¹ ASCE 24-14 definitions are in Sec. 1.2 (shown “ASCE 1.2”); this chart does not show all definitions in ASCE 24-14.

² The IEBC refers generally to IBC and IRC for flood resistant provisions for compliance, as applicable; thus, this checklist includes only definitions used to make that reference.

Definitions Pertinent to Regulating FHAs	In 44 CFR § 59.1	Version Three Model Ord	IBC/ASCE 24 section ¹	IRC section	IEBC section ²	Notes
Coastal A Zone	No	No	Yes	R322.2; R322.3	No	None
Coastal high hazard area	Yes	No	202; ASCE 24 1.2	R322.3	No	None
Design flood	No	No	202; ASCE 24 1.2	R322.1.4	No	None
Design flood elevation	No	No	202; ASCE24 1.2	R322.1.4	No	None
Development	Yes	Yes	No	No	No	None
Dry floodproofing (see Floodproofing)	No See note	No	202; ASCE 24 1.2	No	No	The definition for “dry floodproofing” (IBC and ASCE 24) is equivalent to NFIP definition “floodproofing.”
Encroachment	No	Yes	No	No	No	None
Existing construction (see existing building and existing structure)	Yes	No	202	See note	Yes	IRC scope includes work on existing buildings and uses the term (R102.7, R105.3.1.1,AJ102.5)
Existing manufactured home park or subdivision	Yes	No	No	See note	No	IRC R322.1.9 treats all MH the same, regardless of location (does not have the 36” option)
Expansion to an existing manufactured home park or subdivisions	Yes	No	No	See note	No	IRC R322.1.9 treats all MH the same, regardless of location (does not have the 36” option)
Existing structure/buildings	No	No	202	See note	EB202	IRC scope includes work on existing buildings and uses the term (R102.7, R105.3.1.1,AJ102.5)
Flood or Flooding	Yes	No	202; ASCE 24 1.2	See note	No	IRC does not use the term “flood” as a noun.
Flood damage-resistant material	No	No	202; ASCE 24 1.2	R322.1.8	No	None

Definitions Pertinent to Regulating FHAs	In 44 CFR § 59.1	Version Three Model Ord	IBC/ASCE 24 section ¹	IRC section	IEBC section ²	Notes
Flood hazard areas	No	No	202; ASCE 24 1.2	R106.1.3; Table R301.2(1)	EB202	I-Codes FHA synonymous with SFHA when DFE = BFE
Flood hazard area subject to high velocity wave action (see Coastal high hazard area)	No	No	202	R322.3	No	None
Flood Hazard Boundary Map (FHBM)	Yes	No	See note	See note	No	Through adoption of maps.
Flood Insurance Rate Map (FIRM)	Yes	No	202; ASCE 24 1.2	Table R301.2(1)	No	None
Flood Insurance Study	Yes See note	No	202; ASCE 24 1.2	Table R301.2(1)	No	44 CFR 59.1 defines “Flood elevation study” and Flood Insurance Study is equivalent.
Flood proofing (see Dry Floodproofing)	Yes See note	No	202; ASCE 24 1.2	No	No	The definition for “dry floodproofing” (IBC and ASCE 24) is equivalent to NFIP definition “floodproofing.”
Floodway	Yes	No	202; ASCE 24 1.2	See note	No	IRC uses the term and requires compliance with ASCE 24.
Freeboard	Yes See note	No	See note	See note	No	As used in NFIP regulations, this term is related to protection level of levees. I-Codes does not use the term, although additional height above BFE is required (ASCE 24 defines in commentary).
Functionally dependent use/facility	No	Yes	No	No	No	None
Highest adjacent grade	Yes	No	ASCE 24 1.2	R322.2.1	No	None
Historic structure/ building	Yes	No	202; ASCE 24 1.2	R105.3.1.1	EB 202; EB1201.4	None

Definitions Pertinent to Regulating FHAs	In 44 CFR § 59.1	Version Three Model Ord	IBC/ASCE 24 section ¹	IRC section	IEBC section ²	Notes
Limit of Moderate Wave Action	No	No	Yes	R322.2; R322.3	No	None
Lowest floor	Yes	No	202	R322.1.5	No	None
Manufactured home	Yes	Yes	No	R202; R322.1.9	No	None
Manufactured home park or subdivision	Yes	Yes	No	See note	No	IRC treats all MH the same, regardless of location (does not have the 36" option)
Market value	No	Yes	No	No	No	None
Mudslide (mud flood, mudflow)	Yes	No	ASCE 24 1.2	See note	No	I-Code flood provisions apply in FHAs on adopted maps; FEMA has not delineated mudslide areas.
New manufactured home park	Yes	No	See note	See note	No	IRC treats all MH the same, regardless of location (does not have the 36" option).
Prolonged contact with floodwater	No	No	ASCE 24 1.2	See note	No	IRC R322.1.8; FEMA Technical Bulletin 2.
Recreational vehicle	Yes	Yes	No	No	No	None
Special flood hazard area (SFHA)	Yes	No	202; ASCE 24 1.2	Table R301.1(2)	No	None
Start of construction	Yes	No	202; ASCE 24 1.2	No	No	Premise of the codes is that work on an existing building shall not alter any aspect of the building that was required to comply with the requirements at the time it was built.
Structure	Yes	No	202; ASCE 24 1.2	R202	No	Definition in 59.1 defines it for flood purposes whereas IBC has very simple generic definition.

Definitions Pertinent to Regulating FHAs	In 44 CFR § 59.1	Version Three Model Ord	IBC/ASCE 24 section ¹	IRC section	IEBC section ²	Notes
Substantial damage	Yes	No	202; ASCE 24 1.2	R105.3.1.1	EB202	None
Substantial improvement	Yes	No	202; ASCE 24 1.2	R105.3.1.1	EB202	None
Utility and Miscellaneous Group U	No	Yes	312	No	No	None
Variance	Yes	Yes	No	See note	No	Used in R112.2.2
Violation	Yes	Yes	114	R113	EB113	None
Watercourse	No	Yes	No	No	No	None