

# **FINAL DRAFT**

## **VERSION ONE: MODEL CODE-COORDINATED ORDINANCE**

**IMPORTANT:** Changes to local floodplain management regulations should be reviewed by the NFIP State Coordinating Agency or the Federal Emergency Management Agency (FEMA) Regional Office. Although this model ordinance was prepared by FEMA, it should not be adopted without obtaining the appropriate review and concurrence by the NFIP State Coordinator or the FEMA Regional Office. Careful attention should be paid to changes and renumbering that affect cross references, especially when the ordinance is modified to retain only requirements for flood zones that start with “A.”

This model ordinance is coordinated with – written as a companion to – the flood provisions of the 2015 and later editions of the International Codes® (I-Codes). For more information on the use of this model ordinance, see *Reducing Flood Losses Through the International Codes: Coordinating Building Codes and Floodplain Management Regulations, 5th edition* (2019) at <https://www.fema.gov/media-library/assets/documents/96634>.

### **Version One assumptions:**

- There are no changes to the flood provisions in the bodies of the I-Codes that weaken those flood provisions.
- Chapter 1 (administrative provisions) of the I-Codes *is adopted*, and the flood provisions in that chapter are retained.
- International Building Code (IBC) Appendix G (Flood-Resistant Construction) *is adopted* without changes that weaken its provisions.
- The provisions for all flood zones (i.e., zones that start with “A” and “V”) are applicable. Communities with Flood Insurance Rate Maps (FIRMs) that show only flood zones that start with “A” should check with NFIP State Coordinators or FEMA Regional Offices for assistance to remove the coastal provisions.

### **Other versions:**

- Version Two assumes that Chapter 1 of the I-Codes is adopted and that IBC Appendix G is not adopted.
- Version Three assumes that Chapter 1 of the I-Codes is not adopted and that IBC Appendix G is not adopted.

## **NOTES on VERSION ONE OF THE MODEL CODE-COORDINATED ORDINANCE**

**Identification of Community Specifics.** Locations in the Model Ordinance where community-specific information must be inserted are identified with **{bold brackets}**. The information must be provided for the ordinance to apply to a specific community. Note the title and date of the Flood Insurance Study (FIS) are required and that an optional table can be completed to list effective FIRM panel numbers and dates.

**Adoption of FIS and FIRMs.** Two alternatives are provided for the section on the authority to automatically adopt revised maps [FIRMs]. The first alternative is for States in which communities have that authority (also called “auto-adopt”). The second alternative is for States in which communities do not have that authority. Both alternatives have two options, including one that allows communities to list FIRM panels and dates, which most communities do not chose to adopt.

**Floodplain Administrator Responsibilities.** The Model Ordinance identifies the Floodplain Administrator as the office or position that is designated by the community’s legislative body to be responsible for administering the floodplain management regulations. The Floodplain Administrator may or may not be the Building Official. In many communities, floodplain management responsibilities have traditionally been assigned to a department other than the building department (e.g., planning, engineering, public works, stormwater). In other communities, the responsibilities are assigned to the building department. In addition, in many communities, while one official is designated as the Floodplain Administrator, floodplain management requirements may be adopted in various regulatory instruments (e.g., subdivision regulations, zoning ordinance). The Model Ordinance allows a department other than the building department to retain the floodplain management responsibilities that the building codes do not assign to the Building Official. When the Building Official is designated the Floodplain Administrator, the authorities to perform both functions have different origins. This ordinance should not be modified to replace “Floodplain Administrator” with the title of the position designated to serve in that capacity.

**Building Official Responsibilities.** The Model Ordinance alerts the reader when the Building Official’s authority is established in the building codes. The State must consider the appropriate form of reference to the authorities of the Building Official that are established in the building code.

**Administrative Provisions.** The administrative sections of the Model Ordinance are organized to be consistent with the administrative provisions of the building codes. (Note the Chapter 1 section numbering in the IBC and International Residential Code [IRC] is not exactly the same.) Many States delete, rewrite, or modify the first chapters from the I-Codes, some select IBC Chapter 1 as the administrative provisions for all codes, and some allow communities to write their own administrative procedures. When this Model Ordinance is evaluated for use in a specific State or community, it must be compared to the adopted building codes to determine which provisions to retain in the ordinance and which are covered in the codes. However, it is important to note that some administrative provisions, even if they appear in the building codes, must be retained in the Model Ordinance to appropriately regulate development that is not within the scopes of the building codes.

**Inspection and Enforcement.** The Model Ordinance requires the Floodplain Administrator to make certain inspections and enforce the ordinance, and alerts the reader that building codes authorize the Building Official to inspect work for which building permits have been issued and to enforce the building codes.

**Higher Standards.** See *Reducing Flood Losses Through the International Codes, 5th Edition*, for sample language for several provisions that exceed the minimum requirements of the I-Codes. Higher standards shown as modifications to administrative sections (Chapter 1) and modification of IBC Appendix G can be readily incorporated into this Model Ordinance.

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**ORDINANCE FOR ADOPTION OF THE FLOODPLAIN MANAGEMENT REGULATIONS  
OF {COMMUNITY}**

**ORDINANCE NO. XX-XX**

**AN ORDINANCE BY THE {community's governing body} AMENDING THE {name of community} CODE OF ORDINANCES TO REPEAL {insert appropriate chapter/section numbers}; TO ADOPT A NEW {insert appropriate chapter/section numbers}; TO ADOPT FLOOD HAZARD MAPS; TO DESIGNATE A FLOODPLAIN ADMINISTRATOR; AND PROVIDING FOR SEVERABILITY AND AN EFFECTIVE DATE.**

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**WHEREAS**, the Legislature of the State of **{State}** has, in **{statutory citation}**, conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry; and

**WHEREAS**, the Federal Emergency Management Agency has identified special flood hazard areas within the boundaries of **{name of community}** and such areas may be subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare, and

**WHEREAS**, the **{name of community}** was accepted for participation in the National Flood Insurance Program on **{date of regular program entry}** and the **{community's governing body}** desires to continue to meet the requirements of Title 44 Code of Federal Regulations, Sections 59 and 60, necessary for such participation; and

**WHEREAS**, the **{name of community}** is required, pursuant to **{State statute citation}**, to administer and enforce the State building codes, and such building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas.

**NOW, THEREFORE, BE IT ORDAINED** by the **{community's governing body}** of **{name of community}** that the following floodplain management regulations are hereby adopted.

**SECTION 1. RECITALS.**

The foregoing whereas clauses are incorporated herein by reference and made a part hereof.

**SECTION 2.** These regulations specifically repeal and replace the following ordinance(s) and regulation(s): **{insert citation to existing floodplain management regulations that will be replaced by these regulations and, if applicable, citation(s) to other ordinances that have flood provisions, such as subdivision regulations, that also will be replaced by these regulations}**.

## **SECTION 101 SCOPE AND ADMINISTRATION**

**101.1 Title.** These regulations, in combination with the flood provisions of the **{title of building codes}** (hereinafter “building codes,” consisting of the Building Code, Residential Code, Existing Building Code, and related codes) and Appendix G of the Building Code (hereinafter “Appendix G”), shall be known as the *Floodplain Management Regulations of {name of community}* (hereinafter “these regulations”).

**101.2 Scope.** These regulations, in combination with the flood provisions of the building codes shall apply to all proposed development in flood hazard areas established in Section 102 of these regulations.

**101.3 Purposes and objectives.** The purposes and objectives of these regulations and the flood load and flood resistant construction requirements of the building codes are to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas, designed to:

- (1) Prevent unnecessary disruption of commerce, access and public service during times of flooding.
- (2) Manage the alteration of natural floodplains, stream channels and shorelines;
- (3) Manage filling, grading, dredging and other development which may increase flood damage or erosion potential.
- (4) Prevent or regulate the construction of flood barriers which will divert floodwater or increase flood hazards.
- (5) Contribute to improved construction techniques in the floodplain.
- (6) Minimize damage to public and private facilities and utilities.
- (7) Help maintain a stable tax base by providing for the sound use and development of flood hazard areas.
- (8) Minimize the need for rescue and relief efforts associated with flooding.
- (9) Ensure that property owners, occupants, and potential owners are aware of property located in flood hazard areas.
- (10) Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events.
- (11) Meet the requirements of the National Flood Insurance Program for community participation set forth in Title 44 Code of Federal Regulations, Section 59.22.

**101.4 Coordination with Building Codes.** Pursuant to the requirement established in State statute that the **{name of community}** administer and enforce the State building codes, the **{community’s governing body}** of **{name of community}** does hereby acknowledge that the

building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, these regulations are intended to be administered and enforced in conjunction with the building codes.

**101.5 Warning.** The degree of flood protection required by these regulations and the building codes is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. Enforcement of these regulations and the building codes does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage.

**101.6 Other laws.** The provisions of these regulations shall not be deemed to nullify any provisions of local, State or federal law.

**101.7 Violations.** Any violation of a provision of these regulations, or failure to comply with a permit or variance issued pursuant to these regulations or any requirement of these regulations, shall be handled in accordance with the requirements of **{insert citation to applicable local code}**.

**101.8 Abrogation and greater restrictions.** These regulations supersede any ordinance in effect in flood hazard areas. However, these regulations are not intended to repeal or abrogate any existing ordinances including land development regulations, subdivision regulations, zoning ordinances, stormwater management regulations, or building codes. In the event of a conflict between these regulations and any other ordinance, code, or regulation, the more restrictive shall govern.

## SECTION 102 APPLICABILITY

**102.1 General.** These regulations, in conjunction with the building codes, provide minimum requirements for development located in flood hazard areas, including the subdivision of land and other developments; site improvements and installation of utilities; placement and replacement of manufactured homes; placement of recreational vehicles; new construction and alterations, repair, reconstruction, rehabilitation or additions of existing buildings and structures; substantial improvement of existing buildings and structures, including repair of substantial damage; installation of tanks; temporary structures and temporary or permanent storage; utility and miscellaneous Group U buildings and structures; and certain building work exempt from permit under the building codes; and other buildings and development activities.

*[Option Sec. 102.2 and 102.3, for States that do not have auto-adopt authority]*

**102.2 Establishment of Flood Hazard Areas.** The **{name of community}** was accepted for participation in the National Flood Insurance Program on **{date of regular program entry or date of first floodplain management ordinance, whichever is earlier}**. The **{full title of the FIS}** dated **{date of FIS}** and the accompanying Flood Insurance Rate Maps (FIRM) identified in Table 102.2(1) are hereby adopted by reference and serve as the basis for establishing flood hazard areas. Maps and studies that establish flood hazard areas are on file at the **{name and address of the office of the Floodplain Administrator}**. *[Inclusion of table is optional; if not included here, then further modify residential code footnote (g) to remove indication that maps will be listed by panel and date.]*

**Table 102.2(1). Effective Flood Insurance Rate Map Panel**

**Numbers and Dates**

Map Panel #	Panel Date	Map Panel #	Panel Date

**102.3 Establishment of Flood Hazard Areas; building code.** The building code is modified as follows:

- (1) Modify the Building Code, Section 1612.3: **1612.3 Establishment of flood hazard areas.** To establish flood hazard areas, the applicable governing authority shall adopt, by local floodplain management ordinance, a flood hazard map and supporting data. ~~The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled “The Flood Insurance Study for [INSERT NAME OF JURISDICTION],” dated [INSERT DATE OF ISSUANCE], as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this Section.~~
- (2) Modify the Building Code, Appendix G, Section G102.2: **G102.2 Establishment of flood hazard areas.** Flood hazard areas are established in Section 1612.3 of the building code, International Building Code, adopted by the applicable governing authority on [INSERT DATE].
- (3) Modify the Residential Code, Table R301.2(1), Flood Hazards, footnote (g): g. The jurisdiction shall, by local floodplain management ordinance, specify fill in this part of the table with (a) the date of the jurisdiction’s entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the title and date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, ~~as amended.~~

*[Option Sec. 102.2 and 102.3, for States that have auto-adopt authority]*

**102.2 Establishment of Flood Hazard Areas.** The {name of community} was accepted for participation in the National Flood Insurance Program on {date of regular program entry or date of first floodplain management ordinance, whichever is earlier}. The {full title of the FIS} dated {date of FIS}, and all subsequent amendments and revisions, and the accompanying Flood Insurance Rate Maps (FIRM) identified in Table 102.2(1), and all subsequent amendments and revisions to such maps, are hereby adopted by reference and serve as the basis for establishing flood hazard areas. Maps and studies that establish flood hazard areas are on file at the {name and address of the office of the Floodplain Administrator}. *[Inclusion of table is optional; if not included here, then further modify residential code footnote (g) to remove indication that maps will be listed by panel and date.]*

**Table 102.2(1). Effective Flood Insurance Rate Map Panel Numbers and Dates\***

Map Panel #	Panel Date	Map Panel #	Panel Date

\*individual map panels may have been amended or revised subsequent to the adoption of these regulations.

**102.3 Establishment of Flood Hazard Areas; building code.** The building code is modified as follows:

- (1) Modify the Building Code, Section 1612.3: **1612.3 Establishment of flood hazard areas.** To establish flood hazard areas, the applicable governing authority shall adopt, by local floodplain management ordinance, a flood hazard map and supporting data. ~~The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for [INSERT NAME OF JURISDICTION]," dated [INSERT DATE OF ISSUANCE], as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this Section.~~
- (2) Modify the Building Code, Appendix G, Section G102.2: **G102.2 Establishment of flood hazard areas.** Flood hazard areas are established in Section 1612.3 of the building code. ~~International Building Code, adopted by the applicable governing authority on [INSERT DATE].~~
- (3) Modify the Residential Code, Table R301.2(1), Flood Hazards, footnote (g): g. The jurisdiction shall, by local floodplain management ordinance, specify fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the title and date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, ~~as amended.~~

## **SECTION 103 DUTIES AND POWERS OF THE FLOODPLAIN ADMINISTRATOR**

**103.1 Designation.** The {insert position title} is designated the Floodplain Administrator. The Floodplain Administrator shall have the authority to delegate performance of certain duties to other employees.

**103.2 General.** The Floodplain Administrator is authorized and directed to administer the provisions of these regulations. The Floodplain Administrator shall have the authority to render interpretations of these regulations consistent with the intent and purpose of these regulations and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be consistent with the intent and purpose of these regulations and the flood provisions of the building code and shall not have the effect of waiving specific requirements without the granting of a variance pursuant to Appendix G.

*[Option: If not already done in Appendix G, use this Sec. 103.2.1 to designate the Floodplain Administrator to administer Appendix G.]*

**103.2.1 Building Code, Appendix G.** Where Appendix G refers to the Building Official, each such reference shall refer to the Floodplain Administrator. The Floodplain Administrator is authorized and directed to administer and enforce the provisions of Appendix G.

**103.3 Coordination.** The Floodplain Administrator shall coordinate with the Building Official to administer and enforce the flood provisions of the building code, including Appendix G.

**103.4 Duties.** The duties of the Floodplain Administrator shall include but are not limited to:

- (1) Review all permit applications to determine whether proposed development is located in flood hazard areas established in Section 102 of these regulations.
- (2) Require development in flood hazard areas to be reasonably safe from flooding and to be designed and constructed with methods, practices and materials that minimize flood damage.
- (3) Interpret flood hazard area boundaries, provide available flood elevation and flood hazard information.
- (4) Determine whether additional flood hazard data shall be obtained or developed.
- (5) Review required certifications and documentation specified by these regulations and the building code to determine that such certifications and documentations are complete.
- (6) Establish, in coordination with the Building Official, written procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to Section 103.6 of these regulations.
- (7) Coordinate with the Building Official and others to identify and investigate damaged buildings located in flood hazard areas and inform owners of the requirement to obtain permits for repairs.
- (8) Review requests submitted to the Building Official seeking approval to modify the strict application of the flood load and flood resistant construction requirements of the building code, to determine whether such requests require consideration as a variance pursuant to Appendix G.
- (9) Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.
- (10) Require applicants who propose alteration of a watercourse to notify adjacent jurisdictions and the NFIP State Coordinating Agency, and to submit copies of such notifications to the Federal Emergency Management Agency (FEMA).
- (11) Inspect development within the scope of Appendix G and inspect flood hazard areas to determine if development is undertaken without issuance of permits.
- (12) Prepare comments and recommendations for consideration when applicants seek variances in accordance with Appendix G.
- (13) Cite violations in accordance with Appendix G.
- (14) Notify the Federal Emergency Management Agency when the corporate boundaries of **{name of community}** have been modified.

**103.5 Other permits.** It shall be the responsibility of the Floodplain Administrator to assure that approval of proposed development shall not be given until proof that necessary permits have been granted by federal or State agencies having jurisdiction over such development, including section 404 of the Clean Water Act.



**103.6 Substantial improvement and substantial damage determinations.** For applications for building permits to improve buildings and structures, including alterations, movement, repair, 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) Estimate the market value, or require the applicant to obtain a professional appraisal prepared by a qualified independent appraiser, of the market value of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.
- (2) Compare the cost to perform the improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, where applicable, to the market value of the building or structure.
- (3) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage.
- (4) Notify the applicant when it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the building code is required and notify the applicant when it is determined that work does not constitute substantial improvement or repair of substantial damage.

**103.7 Department records.** In addition to the requirements of the building code and Appendix G, and regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of these regulations and the flood provisions of the building codes, including Flood Insurance Studies, Flood Insurance Rate Maps; documents from FEMA that amend or revise FIRMs; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the building codes and these regulations; notifications to adjacent communities, FEMA, and the State related to alterations of watercourses; assurance that the flood carrying capacity of altered waterways will be maintained; documentation related to variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to these regulations and the flood resistant provisions of the building codes.

**103.8 Liability.** The Floodplain Administrator and any employee charged with the enforcement of these regulations, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by these regulations or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of these regulations shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Floodplain Administrator and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of these regulations. *[Comparable text is at IBC 104.8]*

## **SECTION 201 DEFINITIONS**

**201.1 General.** The following words and terms shall, for the purposes of these regulations, have the meanings shown herein. Other terms are defined in the Building Code and Appendix G and terms are defined where used in the Residential Code (rather than in the definitions section). Where terms are not defined, such terms shall have ordinarily accepted meanings such as the context implies.

## **201.2 Definitions**

**ALTERATION OF A WATERCOURSE.** A dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

**DEVELOPMENT.** Any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, drilling operations and other land-disturbing activities.

**ENCROACHMENT.** The placement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

**MARKET VALUE.** The price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in these regulations, the term refers to the market value of buildings and structures, excluding the land and other improvements on the parcel. Market value shall be determined by one of the following methods: (1) Actual Cash Value (replacement cost depreciated for age and quality of construction), (2) tax assessment value adjusted to approximate market value by a factor provided by the Property Appraiser, or (3) established by a qualified independent appraiser.

**WATERCOURSE.** A river, creek, stream, channel or other topographic feature in, on, through, or over which water flows at least periodically.

### **SECTION 3. SEVERABILITY.**

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

### **SECTION 4. EFFECTIVE DATE.**

This ordinance shall take effect on **{insert date}**.

*[Jurisdiction to add signature blocks.]*