

# Suggested Provisions

Meeting the Minimum Requirements of  
THE NATIONAL FLOOD INSURANCE PROGRAM

and the

PENNSYLVANIA FLOOD PLAIN  
MANAGEMENT ACT (1978-166)  
**SECTION 60.3 (c)**

August 2013

> ready > set > succeed



## EXPLANATORY NOTE:

This suggested ordinance has been prepared to help municipalities meet the requirements of the National Flood Insurance Program and the Pennsylvania Flood Plain Management Act (Act 166-1978). More specifically, this ordinance is meant to serve as a guide to the provisions necessary to comply with the requirements of Section 60.3 (c) of the National Flood Insurance Program as well as the requirements of Act 1978-166 and the regulations adopted by the Department of Community and Economic Development pursuant to that Act.

In using these suggested provisions, certain things must be understood and kept in mind:

1. A municipality may take one of two basic approaches in enacting its floodplain management regulations. It can adopt a single purpose ordinance, which contains all the necessary provisions, or it can enact whatever provisions may be necessary by amending other existing codes and ordinances such as a zoning ordinance, building code, etc. This suggested ordinance can be used as a guide by municipalities that do not have other codes or ordinances which could be amended, or that simply prefer to enact a single purpose ordinance for whatever reason.
2. These provisions cannot be adopted verbatim. Every municipality making use of these provisions will have to make some choices and modifications, depending upon the kind of flood hazard areas and information contained in the Flood Insurance Study and maps from the Federal government, and their own particular circumstances, objectives, and policies.
3. These provisions are not "model" floodplain management regulations. With few exceptions, they have been prepared only with the intention of meeting the minimum requirements of Section 60.3 (c) of the National Flood Insurance Program and the Pennsylvania Flood Plain Management Act. They do not contain everything necessary or desirable for good floodplain management. For any municipality that may be interested, considerably more could be done concerning the regulation of development in flood prone areas. While these regulations are provided to municipalities for compliance with State and Federal floodplain management regulations, this is a technical assistance "tool" and therefore verbatim adoption of this language does not guarantee compliance. The ordinance does still need to be modified to reflect the individual municipality's needs.
4. Because these provisions are with a few exceptions prepared only with the intention of meeting the minimum requirements of Section 60.3 (c) of the National Flood Insurance Program and the Pennsylvania Flood Plain Management Act, these provisions do not contain everything necessary to provide for the lowest flood insurance premiums available. Municipalities are strongly advised to understand the impact that their ordinance provisions have on flood insurance premiums, so that they can make choices best suited to the municipality's needs.

5. Portions of these provisions are required under PA Act 1978-166 regardless of whether or not a municipality “opts in” or “opts out” of administering the PA Uniform Construction Code (UCC), PA Act 45 of 1999. Article XI of Act 1999-45 stipulates that the provisions of Act 1978-166 are not superseded by the Code. Therefore, it is strongly recommended that at a minimum, a municipality retain its current Flood Plain Management provisions and revise them to include the UCC coordinating references contained herein which refer to specific and appropriate supplemental UCC provisions and International Code References.
6. Receipt of a permit or any other action (including appeals) promulgated by a Zoning Officer, Zoning Hearing Board, Court of Common Pleas, or any other governmental entity, indicating that a landowner or municipality is in compliance with the minimum requirements of the National Flood Insurance Program shall not relieve a landowner or a municipality of the obligation to comply with the minimum requirements of the National Flood Insurance Program, as determined by the Federal Emergency Management Agency. Nor will such action cure a violation of the minimum requirements of the National Flood Insurance Program, as determined by the Federal Emergency Management Agency. Notwithstanding any municipal decision to the contrary, failure to meet the minimum National Flood Insurance Program requirements as outlined in 44 Code of Federal Regulations (60.6) will result in imposition of the accompanying sanctions identified in 44 Code of Federal Regulations Section 59.24. A variance, granted in accordance with 44 CFR 60.6, is the sole avenue through which a landowner may permissibly request relief from the minimum requirements of the NFIP and thus avoid sanctions for noncompliance.
7. Prior to the enactment of any ordinance, a municipality should seek the advice of its solicitor regarding its content and enactment. If the solicitor is not involved in the actual preparation of the ordinance, he or she should, at the very least, be given the opportunity to review and comment upon the proposed ordinance prior to its enactment.
8. Any flood plain management provisions enacted by a new ordinance or by amending existing ordinances, codes or laws, shall take precedence over any less restrictive conflicting local laws, ordinances or codes.

The needs, circumstances, and objectives of municipalities are so diverse that the development of a single ordinance for use by all is literally impossible. While use of so called “model” ordinances, suggested provisions, etc., can be of considerable help to a municipality, they are, nevertheless, of value only up to a certain point. No “ready-made” ordinance exists for any municipality. It is for this reason that we caution municipalities with respect to the use of these provisions. As with any other aid to local government, the value to be derived is dependent upon the intelligence with which it is used.

If there are any questions concerning these suggested provisions, the National Flood Insurance Program, or the Pennsylvania Flood Plain Management Act, the Governor’s Center for Local Government Services within the Department of Community and Economic Development should be contacted without hesitation.

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*[Name of Municipality]*  
ORDINANCE NO. \_\_\_\_\_

AN ORDINANCE REQUIRING ALL PERSONS,  
PARTNERSHIPS, BUSINESSES, AND CORPORATIONS TO  
OBTAIN A PERMIT FOR ANY CONSTRUCTION OR  
DEVELOPMENT; PROVIDING FOR THE ISSUANCE OF  
SUCH PERMITS; SETTING FORTH CERTAIN MINIMUM  
REQUIREMENTS FOR NEW CONSTRUCTION AND  
DEVELOPMENT WITHIN AREAS OF THE (*TOWNSHIP,  
BOROUGH, ETC.*) WHICH ARE SUBJECT TO FLOODING;  
AND ESTABLISHING PENALTIES FOR ANY PERSONS  
WHO FAIL, OR REFUSE TO COMPLY WITH, THE  
REQUIREMENTS OR PROVISIONS OF THIS ORDINANCE.

ARTICLE I. STATUTORY AUTHORIZATION

The Legislature of the Commonwealth of Pennsylvania has, by the passage of the Pennsylvania Flood Plain Management Act of 1978, delegated the responsibility to local governmental units to adopt floodplain management regulations to promote public health, safety, and the general welfare of its citizenry. Therefore, the *[Board, Council, etc.]* of the *[Name of Municipality]* does hereby order as follows.

ARTICLE II. GENERAL PROVISIONS

Section 2.01 Intent

The intent of this Ordinance is to:

- A. Promote the general health, welfare, and safety of the community.
- B. Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future.
- C. Minimize danger to public health by protecting water supply and natural drainage.
- D. Reduce financial burdens imposed on the community, its governmental units, and its residents, by preventing excessive development in areas subject to flooding.
- E. Comply with federal and state floodplain management requirements.

Section 2.02 Applicability

- A. It shall be unlawful for any person, partnership, business or corporation to undertake, or cause to be undertaken, any construction or development anywhere within the *[Name of Municipality]* unless a Permit has been obtained from the Floodplain Administrator.
- B. A Permit shall not be required for minor repairs to existing buildings or structures.

Section 2.03 Abrogation and Greater Restrictions

This ordinance supersedes any other conflicting provisions which may be in effect in identified floodplain areas. However, any other ordinance provisions shall remain in full force and effect to the extent that those provisions are more restrictive. If there is any conflict between any of the provisions of this Ordinance, the more restrictive shall apply.

Section 2.04 Severability

If any section, subsection, paragraph, sentence, clause, or phrase of this Ordinance shall be declared invalid for any reason whatsoever, such a decision shall not affect the remaining portions of the Ordinance, which shall remain in full force and effect, and for this purpose the provisions of this Ordinance are hereby declared to be severable.

Section 2.05 Warning and Disclaimer of Liability

The degree of flood protection sought by the provisions of this Ordinance is considered reasonable for regulatory purposes and is based on accepted engineering methods of study. Larger floods may occur or flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Ordinance does not imply that areas outside any identified floodplain areas, or that land uses permitted within such areas will be free from flooding or flood damages.

This Ordinance shall not create liability on the part of the *[Name of Municipality]* or any officer or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made thereunder.

ARTICLE III. ADMINISTRATION

Section 3.01 Designation of the Floodplain Administrator

<p><b>NOTE:</b> Sections 3.01 through 3.09 – If floodplain provisions are amended into a zoning ordinance, the floodplain administrator must be the zoning officer. Any descriptions of duties, procedures, content of a permit application, etc. may add to but may not conflict with those prescribed in the MPC or the local zoning ordinance.</p>
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The *[Insert title of individual responsible for this role- Ex. Building Permit Officer, Zoning Officer, City Manager, etc.]* is hereby appointed to administer and enforce this ordinance and is referred to herein as the Floodplain Administrator. The Floodplain Administrator may: (A) Fulfill the duties and responsibilities set forth in these regulations, (B) Delegate duties and responsibilities set forth in these regulations to qualified technical personnel, plan examiners, inspectors, and other employees, or (C) Enter into a written agreement or written contract with another agency or private sector entity to administer specific provisions of these regulations. Administration of any part of these regulations by another entity shall not relieve the community of its responsibilities pursuant to the participation requirements of the National Flood Insurance Program as set forth in the Code of Federal Regulations at 44 C.F.R. Section 59.22.

In the absence of a designated Floodplain Administrator, the Floodplain Administrator duties are to be fulfilled by the *[Chief Executive Officer]*.

### Section 3.02 Permits Required

A Permit shall be required before any construction or development is undertaken within any area of the *[Name of municipality]*.

### Section 3.03 Duties and Responsibilities of the Floodplain Administrator

- A. The Floodplain Administrator shall issue a Permit only after it has been determined that the proposed work to be undertaken will be in conformance with the requirements of this and all other applicable codes and ordinances.
- B. Prior to the issuance of any permit, the Floodplain Administrator shall review the permit application to determine if all other necessary government permits required by state and federal laws have been obtained, such as those required by the Pennsylvania Sewage Facilities Act (Act 1966-537, as amended); the Pennsylvania Dam Safety and Encroachments Act (Act 1978-325, as amended); the Pennsylvania Clean Streams Act (Act 1937-394, as amended); and the U.S. Clean Water Act, Section 404, 33, U.S.C. 1344. No permit shall be issued until this determination has been made.
- C. **OPTIONAL: In the case of existing structures, prior to the issuance of any Development/Permit, the Floodplain Administrator shall review the history of repairs to the subject building, so that any repetitive loss issues can be addressed before the permit is issued. (If chosen, be sure to include 7.02 I and the repetitive loss definition in 9.02)**
- D. During the construction period, the Floodplain Administrator or other authorized official shall inspect the premises to determine that the work is progressing in compliance with the information provided on the permit application and with all applicable municipal laws and ordinances. He/she shall make as many inspections during and upon completion of the work as are necessary.
- E. In the discharge of his/her duties, the Floodplain Administrator shall have the authority to enter any building, structure, premises or development in the identified floodplain area, upon presentation of proper credentials, at any reasonable hour to enforce the provisions of this ordinance.
- F. In the event the Floodplain Administrator discovers that the work does not comply with the permit application or any applicable laws and ordinances, or that there has been a false statement or misrepresentation by any applicant, the Floodplain Administrator shall revoke the Permit and report such fact to the *[Board, Council, etc.]* for whatever action it considers necessary.
- G. The Floodplain Administrator shall maintain all records associated with the requirements of this ordinance including, but not limited to, finished construction elevation data, permitting, inspection and enforcement.
- H. The Floodplain Administrator is the official responsible for submitting a biennial report to the FEMA concerning community participation in the National Flood Insurance Program.

- I. The responsibility, authority and means to implement the commitments of the Floodplain Administrator can be delegated from the person identified. However, the ultimate responsibility lies with the person identified in the floodplain ordinance as the floodplain administrator/manager.
- J. The Floodplain Administrator shall consider the requirements of the 34 PA Code and the 2009 IBC and the 2009 IRC or latest revisions thereof.

Section 3.04 Application Procedures and Requirements

- A. Application for such a Permit shall be made, in writing, to the Floodplain Administrator on forms supplied by the *[Name of Municipality]*. Such application shall contain the following:
  - 1. Name and address of applicant.
  - 2. Name and address of owner of land on which proposed construction is to occur.
  - 3. Name and address of contractor.
  - 4. Site location including address.
  - 5. Listing of other permits required.
  - 6. Brief description of proposed work and estimated cost, including a breakout of flood-related cost and the market value of the building before the flood damage occurred where appropriate.
  - 7. A plan of the site showing the exact size and location of the proposed construction as well as any existing buildings or structures.
- B. If any proposed construction or development is located entirely or partially within any identified floodplain area, applicants for Permits shall provide all the necessary information in sufficient detail and clarity to enable the Floodplain Administrator to determine that:
  - 1. all such proposals are consistent with the need to minimize flood damage and conform with the requirements of this and all other applicable codes and ordinances;
  - 2. all utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage;
  - 3. adequate drainage is provided so as to reduce exposure to flood hazards;
  - 4. structures will be anchored to prevent floatation, collapse, or lateral movement;
  - 5. building materials are flood-resistant;



6. appropriate practices that minimize flood damage have been used; and
  7. electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities have been designed and located to prevent water entry or accumulation.
- C. Applicants shall file the following minimum information plus any other pertinent information as may be required by the Floodplain Administrator to make the above determination:
1. A completed Permit Application Form.
  2. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one hundred (100) feet or less, showing the following:
    - a. north arrow, scale, and date;
    - b. topographic contour lines, if available;
    - c. the location of all existing and proposed buildings, structures, and other improvements, including the location of any existing or proposed subdivision and development;
    - d. the location of all existing streets, drives, and other access ways; and
    - e. the location of any existing bodies of water or watercourses, identified floodplain areas, and, if available, information pertaining to the floodway, and the flow of water including direction and velocities.
  3. Plans of all proposed buildings, structures and other improvements, drawn at suitable scale showing the following:
    - a. the proposed lowest floor elevation of any proposed building based upon North American Vertical Datum of 1988;
    - b. the elevation of the base flood;
    - c. supplemental information as may be necessary under 34 PA Code, the 2009 IBC or the 2009 IRC.
  4. The following data and documentation:
    - a. if available, information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood; and
    - b. detailed information concerning any proposed floodproofing measures and corresponding elevations.

- c. documentation, certified by a registered professional engineer or architect, to show that the cumulative effect of any proposed development within an AE Area/District without floodway (See Section 4.02 A) when combined with all other existing and anticipated development, will not increase the base flood elevation more than one (1) foot at any point.
- d. **OR OPTIONAL: documentation, certified by a registered professional engineer or architect, to show that the cumulative effect of any proposed development within an AE Area/District with floodway (See Section 4.02 A) when combined with all other existing and anticipated development, will not increase the base flood elevation at any point within the community. (If chosen, delete c. and e.)**
- e. **OR OPTIONAL: documentation, certified by a registered professional engineer or architect, to show that the cumulative effect of any proposed development within any Identified Floodplain Area (See Section 4.01), when combined with all other existing and anticipated development, will not cause any increase in the base flood elevation. (If chosen, delete c. and d. above).**
- f. document, certified by a registered professional engineer or architect, which states that the proposed construction or development has been adequately designed to withstand the pressures, velocities, impact and uplift forces associated with the base flood.

Such statement shall include a description of the type and extent of flood proofing measures which have been incorporated into the design of the structure and/or the development.

- g. detailed information needed to determine compliance with Section 5.03 F., Storage, and Section 5.04, Development Which May Endanger Human Life, including:
  - i. the amount, location and purpose of any materials or substances referred to in Sections 5.03 F. and 5.04 which are intended to be used, produced, stored or otherwise maintained on site.
  - ii. a description of the safeguards incorporated into the design of the proposed structure to prevent leaks or spills of the dangerous materials or substances listed in Section 5.04 during a base flood.
- h. the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development."
- i. where any excavation or grading is proposed, a plan meeting the

requirements of the Department of Environmental Protection, to implement and maintain erosion and sedimentation control.

- D. Applications for Permits shall be accompanied by a fee, payable to the municipality based upon the estimated cost of the proposed construction as determined by the Floodplain Administrator.

Section 3.05 Review of Application by County Conservation District

**OPTIONAL: A copy of all applications and plans for any proposed construction or development in any identified floodplain area to be considered for approval shall be submitted by the Floodplain Administrator to the County Conservation District for review and comment prior to the issuance of a Permit. The recommendations of the Conservation District shall be considered by the Floodplain Administrator for possible incorporation into the proposed plan.**

Section 3.06 Review of Application by Others

A copy of all plans and applications for any proposed construction or development in any identified floodplain area to be considered for approval may be submitted by the Floodplain Administrator to any other appropriate agencies and/or individuals (e.g. planning commission, municipal engineer, etc.) for review and comment.

Section 3.07 Changes

After the issuance of a Permit by the Floodplain Administrator, no changes of any kind shall be made to the application, permit or any of the plans, specifications or other documents submitted with the application without the written consent or approval of the Floodplain Administrator. Requests for any such change shall be in writing, and shall be submitted by the applicant to Floodplain Administrator for consideration.

Section 3.08 Placards

In addition to the Permit, the Floodplain Administrator shall issue a placard which shall be displayed on the premises during the time construction is in progress. This placard shall show the number of the Permit, the date of its issuance, and be signed by the Floodplain Administrator.

Section 3.09 Start of Construction

Work on the proposed construction or development shall begin within 180 days after the date of issuance and shall be completed within twelve (12) months after the date of issuance of the Permit or the permit shall expire unless a time extension is granted, in writing, by the Floodplain Administrator. The actual start of construction means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufacture home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the

main structure. For a substantial improvement, the actual start of construction means the first, alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Time extensions shall be granted only if a written request is submitted by the applicant, which sets forth sufficient and reasonable cause for the Floodplain Administrator to approve such a request.

**NOTE:** The start of construction timeline commences when the floodplain development permit is issued which is often later than when zoning approval is granted.

### Section 3.10   Enforcement

**NOTE:** If enforcement provisions are outlined in another ordinance or code, the applicable code needs to be referenced in the floodplain ordinance. If floodplain provisions are amended into a zoning ordinance, the MPC has specific provisions for enforcement notice, procedures, and remedies including penalties (see MPC 616.1 to 617.2) and those should also be referenced in the floodplain ordinance

#### A. Notices

Whenever the Floodplain Administrator or other authorized municipal representative determines that there are reasonable grounds to believe that there has been a violation of any provisions of this Ordinance, or of any regulations adopted pursuant thereto, the Floodplain Administrator shall give notice of such alleged violation as hereinafter provided. Such notice shall:

1. be in writing;
2. include a statement of the reasons for its issuance;
3. allow a reasonable time not to exceed a period of thirty (30) days for the performance of any act it requires;
4. be served upon the property owner or his agent as the case may require; provided, however, that such notice or order shall be deemed to have been properly served upon such owner or agent when a copy thereof has been served with such notice by any other method authorized or required by the laws of this State;
5. contain an outline of remedial actions which, if taken, will effect compliance with the provisions of this Ordinance.

#### B. Penalties

Any person who fails to comply with any or all of the requirements or provisions of this

Ordinance or who fails or refuses to comply with any notice, order of direction of the Floodplain Administrator or any other authorized employee of the municipality shall be guilty of a misdemeanor and upon conviction shall pay a fine to *[Name of Municipality]*, of not less than Twenty-five Dollars (\$25.00) nor more than Six Hundred Dollars (\$600.00) plus costs of prosecution. In addition to the above penalties all other actions are hereby reserved including an action in equity for the proper enforcement of this Ordinance. The imposition of a fine or penalty for any violation of, or noncompliance with this Ordinance shall not excuse the violation or noncompliance or permit it to continue. All such persons shall be required to correct or remedy such violations and noncompliance within a reasonable time. Any development initiated or any structure or building constructed, reconstructed, enlarged, altered, or relocated, in noncompliance with this Ordinance may be declared by the *[Board, Council, etc.]* to be a public nuisance and abatable as such.

### Section 3.11 Appeals

**NOTE:** Appeals from determinations made by a Zoning Officer or Municipal Official regarding floodplain provisions, whether or not they are amended into the municipality's zoning code, must be acted on by the zoning hearing board following Municipal Planning Code (MPC) procedures for Zoning Hearing Board (ZHB) hearings, decisions, etc. See MPC 909.1(a)(4). Not all municipalities have a zoning hearing board; in this instance the appeal shall be taken directly to the Court of Common Pleas of the county within which the municipality is located.

- A. Any person aggrieved by any action or decision of the Floodplain Administrator concerning the administration of the provisions of this Ordinance, may appeal to the *[Board, Council, etc.]*. Such appeal must be filed, in writing, within thirty (30) days after the decision, determination or action of the Floodplain Administrator.
- B. Upon receipt of such appeal the *[Board, Council, etc.]* shall set a time and place, within not less than ten (10) or not more than thirty (30) days, for the purpose of considering the appeal. Notice of the time and place at which the appeal will be considered shall be given to all parties.
- C. Any person aggrieved by any decision of the *[Board, Council, etc.]* may seek relief there from by appeal to court, as provided by the laws of this State including the Pennsylvania Flood Plain Management Act.

**NOTE:** Granting of a municipal appeal will not relieve a landowner or a municipality from the obligation to comply with the minimum requirements of the National Flood Insurance Program. Landowners and municipalities that fail to meet the Program's minimum requirements, notwithstanding any appellate decision to the contrary, are in violation of the National Flood Insurance Program and remain subject to the accompanying penalties.

## ARTICLE IV. IDENTIFICATION OF FLOODPLAIN AREAS

### Section 4.01 Identification

The identified floodplain area shall be:

- A. any areas of *[Name of Municipality]*, classified as Special Flood Hazard Areas (SFHAs) in the Flood Insurance Study (FIS) and the accompanying Flood Insurance Rate Maps (FIRMs) dated *[effective map date]* and issued by the Federal Emergency Management Agency (FEMA) or the most recent revision thereof, including all digital data developed as part of the Flood Insurance Study and,
- B. OPTIONAL: any Community Identified Flood Hazard Areas. (If this is adopted, Section 4.02 D must also be adopted.)**

The above referenced FIS and FIRMs, and any subsequent revisions and amendments are hereby adopted by *[Name of Municipality]* and declared to be a part of this ordinance.

### Section 4.02 Description and Special Requirements of Identified Floodplain Areas

The identified floodplain area shall consist of the following specific areas/districts:

- A. The AE Area/District shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided.
  - 1. The AE Area adjacent to the floodway shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided and a floodway has been delineated.

**NOTE:** 4.02(B)(2) is required only for communities with AE Zones without a designated floodway on the FIRM.

- 2. **AE Area without floodway shall be those areas identified as an AE zone on the FIRM included in the FIS prepared by FEMA for which base flood elevations have been provided but no floodway has been determined.**
  - i. **No permit shall be granted for any construction, development, use, or activity within any AE Area/District without floodway unless it is demonstrated that the cumulative effect of the proposed development would not, together with all other existing and anticipated development, increase the BFE more than one (1) foot at any point.**
  - ii. **No new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse, unless the appropriate permit is obtained from the Department of Environmental Protection Regional Office.**

**NOTE:** In some instances, Zones A, AO, or AH may not appear on the FIRM, in which case Section 4.02 (B or C) should be omitted as appropriate. Check the FIRM carefully to see if any of these zones have been delineated.

- B. The A Area/District shall be those areas identified as an A Zone on the FIRM included in the FIS prepared by FEMA and for which no base flood elevations have been provided. For these areas, elevation and floodway information from other Federal, State, or other acceptable sources shall be used when available. Where other acceptable information is not available, the base flood elevation shall be determined by using the elevation of a point on the boundary of the identified floodplain area which is nearest the construction site.

In lieu of the above, the municipality may require the applicant to determine the elevation with hydrologic and hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the municipality.

- C. The AO and AH Area/ District shall be those areas identified as Zones AO and AH on the FIRM and in the FIS. These areas are subject to inundation by 1-percent-annual-chance shallow flooding where average depths are between one and three feet. In Zones AO and AH, drainage paths shall be established to guide floodwaters around and away from structures on slopes.
- D. **OPTIONAL:** Community Identified Flood Hazard Areas shall be those areas where *[Name of Municipality]* has identified local flood hazard or ponding areas, as delineated and adopted on a “Local Flood Hazard Map” using best available topographic data and locally derived information such as flood of record, historic high water marks, soils or approximate study methodologies. (If adopted, Section 4.01 (B) must also be adopted.)

**NOTE:** Community Identified Flood Hazard Areas should be used when communities seek to regulate areas of flood risk outside of the area identified on the FIRM or wish to regulate other areas of potential flood risk, including but not limited to Coastal A Zones, advisory or preliminary flood heights or zones, and hydric soils. While the floodplain ordinance regulations will apply to all development proposed within a Community Identified Flood Hazard Area, only those areas identified as Special Flood Hazard Area on the FIRM will require mandatory flood insurance purchase.

#### Section 4.03 Changes in Identification of Area

The identified floodplain area may be revised or modified by the [Board, Council, etc.] where studies or information provided by a qualified agency or person documents the need for such revision. However, prior to any such change to the Special Flood Hazard Area, approval must be obtained from FEMA. Additionally, as soon as practicable, but not later than six (6) months after the date such information becomes available, a community shall notify FEMA of the changes to the Special Flood Hazard Area by submitting technical or scientific data. See 5.01 (B) for situations where FEMA notification is required.

Section 4.04 Boundary Disputes

**NOTE:** If floodplain provisions are amended into a zoning ordinance, any boundary dispute would arise because a party is aggrieved by the zoning officer's determination. The recourse in that situation would be an appeal of that determination to the zoning hearing board.

Should a dispute concerning any identified floodplain boundary arise, an initial determination shall be made by the *[Name of Municipality]* Planning Commission and any party aggrieved by this decision or determination may appeal to the *[Board, Council, etc.]*. The burden of proof shall be on the appellant.

Section 4.05 Jurisdictional Boundary Changes

Prior to development occurring in areas where annexation or other corporate boundary changes are proposed or have occurred, the community shall review flood hazard data affecting the lands subject to boundary changes. The community shall adopt and enforce floodplain regulations in areas subject to annexation or corporate boundary changes which meet or exceed those in CFR 44 60.3.

ARTICLE V. TECHNICAL PROVISIONS

Section 5.01 General

A. Alteration or Relocation of Watercourse

1. No encroachment, alteration, or improvement of any kind shall be made to any watercourse until all adjacent municipalities which may be affected by such action have been notified by the municipality, and until all required permits or approvals have first been obtained from the Department of Environmental Protection Regional Office.
2. No encroachment, alteration, or improvement of any kind shall be made to any watercourse unless it can be shown that the activity will not reduce or impede the flood carrying capacity of the watercourse in any way.
3. In addition, FEMA and the Pennsylvania Department of Community and Economic Development, shall be notified prior to any alteration or relocation of any watercourse.

**NOTE:** While submission of technical or scientific data is a community responsibility, a community may pass this responsibility onto the applicant. Since there are often fees associated with processing Letters of Map Change, communities should consider who will fulfill this requirement.

B. When a community or applicant proposes to permit the following encroachments:

- any development that causes a rise in the base flood elevations within the floodway;
- or



- any development occurring in Zones A1-30 and Zone AE without a designated floodway, which will cause a rise of more than one foot in the base flood elevation; or
- alteration or relocation of a stream (including but not limited to installing culverts and bridges)

the **[choose community or applicant]** shall (as per 44 CFR Part 65.12):

1. Apply to FEMA for conditional approval of such action prior to permitting the encroachments to occur.
  2. Upon receipt of the Administrator’s conditional approval of map change and prior to approving the proposed encroachments, a community shall provide evidence to FEMA of the adoption of floodplain management ordinances incorporating the increased base flood elevations and / or revised floodway reflecting the post-project condition.
  3. Upon completion of the proposed encroachments, a community shall provide as-built certifications. FEMA will initiate a final map revision upon receipt of such certifications in accordance with 44 CFR Part 67.
- C. Any new construction, development, uses or activities allowed within any identified floodplain area shall be undertaken in strict compliance with the provisions contained in this Ordinance and any other applicable codes, ordinances and regulations.
- D. **OPTIONAL: Within any Identified Floodplain Area, no new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.**

Section 5.02 Elevation and Floodproofing Requirements

**NOTE:** The requirement to elevate and floodproof to the regulatory flood elevation (as defined in this ordinance as: base flood elevation plus one and one-half (1 ½) foot of freeboard) in this section is an higher standard to the minimum requirements of the National Flood Insurance Program’s (NFIP’s) to elevate and floodproof structures to the BFE. Elevating an additional 1 ½ feet reduces insurance premium rates and also provides a greater level of protection from flood to these structures.

**OPTIONAL: Within any Identified Floodplain Area any new construction or substantial improvements shall be prohibited. If a variance is obtained for new construction or substantial improvements in the Identified Floodplain Area in accordance with the criteria in Article VIII, then the following provisions apply:**

A. Residential Structures

1. In AE, A1-30, and AH Zones, any new construction or substantial improvement

shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation.

2. In A Zones, where there are no Base Flood Elevations specified on the FIRM, any new construction or substantial improvement shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation determined in accordance with Section 4.02 (B) of this ordinance.
3. In AO Zones, any new construction or substantial improvement shall have the lowest floor (including basement) at or above the highest adjacent grade at least as high as the depth number specified on the FIRM.
4. The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 International Residential Code (IRC) or the most recent revisions thereof and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized.

#### B. Non-residential Structures

1. In AE, A1-30 and AH Zones, any new construction or substantial improvement of a non-residential structure shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation, or be designed and constructed so that the space enclosed below the regulatory flood elevation:
  - a. is floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and,
  - b. has structural components with the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy:
2. In A Zones, where there are no Base Flood Elevations specified on the FIRM, any new construction or substantial improvement shall have the lowest floor (including basement) elevated or completely floodproofed up to, or above, the regulatory flood elevation determined in accordance with Section 4.02 (B) of this ordinance.
3. In AO Zones, any new construction or substantial improvement shall have their lowest floor elevated or completely floodproofed above the highest adjacent grade to at least as high as the depth number specified on the FIRM.
4. Any non-residential structure, or part thereof, made watertight below the regulatory flood elevation shall be floodproofed in accordance with the WI or W2 space classification standards contained in the publication entitled "Flood-Proofing Regulations" published by the U.S. Army Corps of Engineers (June 1972, as amended March 1992) or with some other equivalent standard. All plans and specifications for such floodproofing shall be accompanied by a statement certified by a registered professional engineer or architect which states that the proposed design and methods of construction are in conformance with the above

referenced standards.

5. The design and construction standards and specifications contained in the 2009 International Building Code (IBC) and in the 2009 International Residential Code (IRC) or the most recent revisions thereof and ASCE 24 and 34 PA Code (Chapters 401-405 as amended) shall be utilized.

C. Space below the lowest floor

1. Fully enclosed space below the lowest floor (excluding basements) which will be used solely for the parking of a vehicle, building access, or incidental storage in an area other than a basement, shall be designed and constructed to allow for the automatic entry and exit of flood waters for the purpose of equalizing hydrostatic forces on exterior walls. The term "fully enclosed space" also includes crawl spaces.
2. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
  - a. a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.
  - b. the bottom of all openings shall be no higher than one (1) foot above grade.
  - c. openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

D. Historic Structures

Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined in this ordinance, must comply with all ordinance requirements that do not preclude the structure's continued designation as a historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National Register of Historic Places or the State Inventory of Historic places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

E. **OPTIONAL: Accessory structures**

**Structures accessory to a principal building need not be elevated or floodproofed to remain dry, but shall comply, at a minimum, with the following requirements:**

- A. the structure shall not be designed or used for human habitation, but shall be limited to the parking of vehicles, or to the storage of tools, material, and**

- equipment related to the principal use or activity.
- B. floor area shall not exceed 200 square feet.
  - C. The structure will have a low damage potential.
  - D. the structure will be located on the site so as to cause the least obstruction to the flow of flood waters.
  - E. power lines, wiring, and outlets will be elevated to the regulatory flood elevation.
  - F. permanently affixed utility equipment and appliances such as furnaces, heaters, washers, dryers, etc. are prohibited.
  - G. sanitary facilities are prohibited.
  - H. the structure shall be adequately anchored to prevent flotation or movement and shall be designed to automatically provide for the entry and exit of floodwater for the purpose of equalizing hydrostatic forces on the walls. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
    - a. a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.
    - b. the bottom of all openings shall be no higher than one (1) foot above grade.
    - c. openings may be equipped with screens, louvers, etc. or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

**NOTE:** If a community chooses not to include language related to accessory structures, then all structures located in the Identified Floodplain Area, including accessory structures will have to be elevated or floodproofed as established in Section 5.02.

### Section 5.03 Design and Construction Standards

The following minimum standards shall apply for all construction and development proposed within any identified floodplain area:

#### A. Fill

1. **OPTIONAL:** Within any Identified Floodplain Area the use of fill shall be prohibited. If a variance is obtained in accordance with the criteria in

**Article VIII, then the following provisions apply:**

2. If fill is used, it shall:
  - a. extend laterally at least fifteen (15) feet beyond the building line from all points;
  - b. consist of soil or small rock materials only - Sanitary Landfills shall not be permitted;
  - c. be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;
  - d. be no steeper than one (1) vertical to two (2) horizontal, feet unless substantiated data, justifying steeper slopes are submitted to, and approved by the Floodplain Administrator; and
  - e. be used to the extent to which it does not adversely affect adjacent properties.

**B. Drainage Facilities**

Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner. The system shall ensure proper drainage along streets, and provide positive drainage away from buildings. The system shall also be designed to prevent the discharge of excess runoff onto adjacent properties.

**C. Water and Sanitary Sewer Facilities and Systems**

1. All new or replacement water supply and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damages and the infiltration of flood waters.
2. Sanitary sewer facilities and systems shall be designed to prevent the discharge of untreated sewage into flood waters.
3. No part of any on-site sewage system shall be located within any identified floodplain area except in strict compliance with all State and local regulations for such systems. If any such system is permitted, it shall be located so as to avoid impairment to it, or contamination from it, during a flood.
4. The design and construction provisions of the UCC and FEMA #348, Protecting Building Utilities From Flood Damages and The International Private Sewage Disposal Code shall be utilized.

**D. Other Utilities**

All other utilities such as gas lines, electrical and telephone systems shall be located, elevated (where possible) and constructed to minimize the chance of impairment during a

flood.

E. Streets

The finished elevation of all new streets shall be no more than one (1) foot below the Regulatory Flood Elevation.

F. Storage

All materials that are buoyant, flammable, explosive, or in times of flooding, could be injurious to human, animal, or plant life, and not listed in Section 5.04, Development Which May Endanger Human Life, shall be stored at or above the Regulatory Flood Elevation or floodproofed to the maximum extent possible.

G. Placement of Buildings and Structures

All buildings and structures shall be designed, located, and constructed so as to offer the minimum obstruction to the flow of water and shall be designed to have a minimum effect upon the flow and height of flood water.

H. Anchoring

1. All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement.
2. All air ducts, large pipes, storage tanks, and other similar objects or components located below the regulatory flood elevation shall be securely anchored or affixed to prevent flotation.

I. Floors, Walls and Ceilings

1. Wood flooring used at or below the Regulatory Flood Elevation shall be installed to accommodate a lateral expansion of the flooring, perpendicular to the flooring grain without causing structural damage to the building.
2. Plywood used at or below the regulatory flood elevation shall be of a "marine" or "water-resistant" variety.
3. Walls and ceilings at or below the regulatory flood elevation shall be designed and constructed of materials that are "water-resistant" and will withstand inundation.
4. Windows, doors, and other components at or below the regulatory flood elevation shall be made of metal or other "water-resistant" material.

J. Paints and Adhesives

1. Paints and other finishes used at or below the regulatory flood elevation shall be of "marine" or "water-resistant" quality.

2. Adhesives used at or below the regulatory flood elevation shall be of a "marine" or "water-resistant" variety.
3. All wooden components (doors, trim, cabinets, etc.) used at or below the regulatory flood elevation shall be finished with a "marine" or "water-resistant" paint or other finishing material.

#### K. Electrical Components

1. Electrical distribution panels shall be at least three (3) feet above the base flood elevation.
2. Separate electrical circuits shall serve lower levels and shall be dropped from above.

#### L. Equipment

Water heaters, furnaces, air conditioning and ventilating units, and other electrical, mechanical or utility equipment or apparatus shall not be located below the Regulatory Flood Elevation.

#### M. Fuel Supply Systems

All gas and oil supply systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood waters. Additional provisions shall be made for the drainage of these systems in the event that flood water infiltration occurs.

#### N. Uniform Construction Code Coordination

The Standards and Specifications contained 34 PA Code (Chapters 401-405), as amended and not limited to the following provisions shall apply to the above and other sections and sub-sections of this ordinance, to the extent that they are more restrictive and supplement the requirements of this ordinance.

International Building Code (IBC) 2009 or the latest edition thereof:  
Secs. 801, 1202, 1403, 1603, 1605, 1612, 3402, and Appendix G.

International Residential Building Code (IRC) 2009 or the latest edition thereof:  
Secs. R104, R105, R109, R323, Appendix AE101, Appendix E and Appendix J.

### Section 5.04 Development Which May Endanger Human Life

**OPTIONAL: Within any Identified Floodplain Area, any structure of the kind described in Subsection A., below, shall be prohibited. If a variance is obtained in accordance with the criteria in Article VIII, then the following provisions apply: (5.04 D, E, & F) (note: if no variance for this activity is allowed, do not list D, E, & F)**

A. In accordance with the Pennsylvania Flood Plain Management Act, and the regulations adopted by the Department of Community and Economic Development as required by the Act, any new or substantially improved structure which:

1. will be used for the production or storage of any of the following dangerous materials or substances; or,
2. will be used for any activity requiring the maintenance of a supply of more than 550 gallons, or other comparable volume, of any of the following dangerous materials or substances on the premises; or,
3. will involve the production, storage, or use of any amount of radioactive substances;

shall be subject to the provisions of this section, in addition to all other applicable provisions. The following list of materials and substances are considered dangerous to human life:

- Acetone
- Ammonia
- Benzene
- Calcium carbide
- Carbon disulfide
- Celluloid
- Chlorine
- Hydrochloric acid
- Hydrocyanic acid
- Magnesium
- Nitric acid and oxides of nitrogen
- Petroleum products (gasoline, fuel oil, etc.)
- Phosphorus
- Potassium
- Sodium
- Sulphur and sulphur products
- Pesticides (including insecticides, fungicides, and rodenticides)
- Radioactive substances, insofar as such substances are not otherwise regulated.

**B. OPTIONAL: Within any Identified Floodplain Area, any new or substantially improved structure of the kind described in Subsection A., above, shall be prohibited within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.**

C. Where permitted within any Identified Floodplain Area, any new or substantially improved residential structure of the kind described in Section 5.04 (A), above, shall be elevated to remain completely dry up to at least one and one half (1 ½) feet above base



flood elevation.

D. Where permitted within any Identified Floodplain Area, any new or substantially improved non-residential structure of the kind described in Section 5.04 (A), above, shall be built in accordance with Sections 5.01, 5.02 and 5.03, including:

1. elevated, or designed and constructed to remain completely dry up to at least one and one half (1 ½) feet above base flood elevation, and
2. designed to prevent pollution from the structure or activity during the course of a base flood.

Any such structure, or part thereof, that will be built below the regulatory flood elevation shall be designed and constructed in accordance with the standards for completely dry floodproofing contained in the publication "Flood-Proofing Regulations" (U.S. Army Corps of Engineers, June 1972 as amended March 1992), or with some other equivalent watertight standard.

#### Section 5.05 Special Requirements for Subdivisions

All subdivision proposals and development proposals containing at least 50 lots or at least 5 acres, whichever is the lesser, in Identified Floodplain Areas where base flood elevation data are not available, shall be supported by hydrologic and hydraulic engineering analyses that determine base flood elevations and floodway information. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA for a Conditional Letter of Map Revision and Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

#### Section 5.06 Special Requirements for Manufactured Homes

**A. OPTIONAL: Within any Identified Floodplain Area manufactured homes shall be prohibited. If a variance is obtained in accordance with the criteria in Article VIII, then the following provisions apply:**

**B. OPTIONAL: Within Identified Floodplain Areas, manufactured homes shall be prohibited within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.**

C. Where permitted within Identified Floodplain Areas, all manufactured homes, and any improvements thereto, shall be:

1. placed on a permanent foundation.
2. elevated so that the lowest floor of the manufactured home is at least to the regulatory flood elevation and,
3. anchored to resist flotation, collapse, or lateral movement.

**4. OPTIONAL: and have all ductwork and utilities including HVAC/heat pump elevated to the regulatory flood elevation.**

- D. Installation of manufactured homes shall be done in accordance with the manufacturers' installation instructions as provided by the manufacturer. Where the applicant cannot provide the above information, the requirements of Appendix E of the 2009 "International Residential Building Code" or the "U.S. Department of Housing and Urban Development's Permanent Foundations for Manufactured Housing," 1984 Edition, draft or latest revision thereto shall apply and 34 PA Code Chapter 401-405.
- E. Consideration shall be given to the installation requirements of the 2009 IBC, and the 2009 IRC or the most recent revisions thereto and 34 PA Code, as amended where appropriate and applicable to units where the manufacturers' standards for anchoring cannot be provided or were not established for the proposed unit(s) installation.

Section 5.07 Special Requirements for Recreational Vehicles

**OPTIONAL: Within any Identified Floodplain Area recreational vehicles shall be prohibited. If a variance is obtained in accordance with the criteria in Article VIII, then the following provisions apply:**

Recreational vehicles in Zones A, A1-30, AH and AE must either:

- a. be on the site for fewer than 180 consecutive days, and
  - b. be fully licensed and ready for highway use,
- or
- c. meet the permit requirements for manufactured homes in Section 5.06.

**NOTE:** Choosing to regulate recreational vehicles mandating compliance with 5.07 (1 and 2) or 5.07 (3) is a higher standard than the minimum NFIP requirements for participation. The minimums require 5.07 (1) or (2) or (3).

ARTICLE VI. ACTIVITIES REQUIRING SPECIAL PERMITS

**NOTE:** Municipalities may elect to prohibit the following activities requiring Special Permit in Identified Floodplain Areas (If so, this section becomes 'Prohibited Activities' and Sections 6.02, 6.03, and 6.04 can be deleted).

Section 6.01 General

In accordance with the administrative regulations promulgated by the Department of Community and Economic Development to implement the Pennsylvania Flood Plain Management Act, the following activities shall be prohibited within any Identified Floodplain Area, unless a Special

Permit has been issued by the *[Name of Municipality]*:

- A. The commencement of any of the following activities; or the construction, enlargement, or expansion of any structure used, or intended to be used, for any of the following activities:
  - 1. Hospitals
  - 2. Nursing homes
  - 3. Jails or prisons
- B. The commencement of, or any construction of, a new manufactured home park or manufactured home subdivision, or substantial improvement to an existing manufactured home park or manufactured home subdivision.

Section 6.02 Application Requirements for Special Permits

Applicants for Special Permits shall provide five copies of the following items:

- A. A written request including a completed Permit Application Form.
- B. A small scale map showing the vicinity in which the proposed site is located.
- C. A plan of the entire site, clearly and legibly drawn at a scale of one (1) inch being equal to one hundred (100) feet or less, showing the following:
  - 1. north arrow, scale and date;
  - 2. topography based upon the North American Vertical Datum (NAVD) of 1988, showing existing and proposed contours at intervals of two (2) feet;
  - 3. all property and lot lines including dimensions, and the size of the site expressed in acres or square feet;
  - 4. the location of all existing streets, drives, other access ways, and parking areas, with information concerning widths, pavement types and construction, and elevations;
  - 5. the location of any existing bodies of water or watercourses, buildings, structures and other public or private facilities, including railroad tracks and facilities, and any other natural and man-made features affecting, or affected by, the proposed activity or development;
  - 6. the location of the floodplain boundary line, information and spot elevations concerning the base flood elevation, and information concerning the flow of water including direction and velocities;
  - 7. the location of all proposed buildings, structures, utilities, and any other

improvements; and

8. any other information which the municipality considers necessary for adequate review of the application.

D. Plans of all proposed buildings, structures and other improvements, clearly and legibly drawn at suitable scale showing the following:

1. sufficiently detailed architectural or engineering drawings, including floor plans, sections, and exterior building elevations, as appropriate;
2. for any proposed building, the elevation of the lowest floor (including basement) and, as required, the elevation of any other floor;
3. complete information concerning flood depths, pressures, velocities, impact and uplift forces, and other factors associated with the base flood;
4. detailed information concerning any proposed floodproofing measures;
5. cross section drawings for all proposed streets, drives, other accessways, and parking areas, showing all rights-of-way and pavement widths;
6. profile drawings for all proposed streets, drives, and vehicular accessways including existing and proposed grades; and
7. plans and profiles of all proposed sanitary and storm sewer systems, water supply systems, and any other utilities and facilities.

E. The following data and documentation:

1. certification from the applicant that the site upon which the activity or development is proposed is an existing separate and single parcel, owned by the applicant or the client he represents;
2. certification from a registered professional engineer, architect, or landscape architect that the proposed construction has been adequately designed to protect against damage from the base flood;
3. a statement, certified by a registered professional engineer, architect, landscape architect, or other qualified person which contains a complete and accurate description of the nature and extent of pollution that might possibly occur from the development during the course of a base flood, including a statement concerning the effects such pollution may have on human life;
4. a statement certified by a registered professional engineer, architect, or landscape architect, which contains a complete and accurate description of the effects the proposed development will have on base flood elevation and flows;

5. a statement, certified by a registered professional engineer, architect, or landscape architect, which contains a complete and accurate description of the kinds and amounts of any loose buoyant materials or debris that may possibly exist or be located on the site below the base flood elevation and the effects such materials and debris may have on base flood elevation and flows;
6. the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development;"
7. where any excavation or grading is proposed, a plan meeting the requirements of the Department of Environmental Protection to implement and maintain erosion and sedimentation control;
8. any other applicable permits such as, but not limited to, a permit for any activity regulated by the Department of Environmental Protection under Section 302 of Act 1978-166; and
9. an evacuation plan which fully explains the manner in which the site will be safely evacuated before or during the course of a base flood.

#### Section 6.03 Application Review Procedures

Upon receipt of an application for a Special Permit by the *[Name of Municipality]* the following procedures shall apply in addition to those of Article III:

- A. Within three (3) working days following receipt of the application, a complete copy of the application and all accompanying documentation shall be forwarded to the County Planning Commission by registered or certified mail for its review and recommendations. Copies of the application shall also be forwarded to the *[Name of Municipality]* Planning Commission and *[Name of Municipality]* engineer for review and comment.
- B. If an application is received that is incomplete, the *[Name of Municipality]* shall notify the applicant in writing, stating in what respect the application is deficient.
- C. If the *[Name of Municipality]* decides to disapprove an application, it shall notify the applicant, in writing, of the reasons for the disapproval.
- D. If the *[Name of Municipality]* approves an application, it shall file written notification, together with the application and all pertinent information, with the Department of Community and Economic Development, by registered or certified mail, within five (5) working days after the date of approval.
- E. Before issuing the Special Permit, the *[Name of Municipality]* shall allow the Department of Community and Economic Development thirty (30) days, after receipt of the notification by the Department, to review the application and decision made by the *[Name of Municipality]*.
- F. If the *[Name of Municipality]* does not receive any communication from the Department

of Community and Economic Development during the thirty (30) day review period, it may issue a Special Permit to the applicant.

- G. If the Department of Community and Economic Development should decide to disapprove an application, it shall notify the *[Name of Municipality]* and the applicant, in writing, of the reasons for the disapproval, and the *[Name of Municipality]* shall not issue the Special Permit.

#### Section 6.04 Special Technical Requirements

- A. In addition to the requirements of Article V of this Ordinance, the following minimum requirements shall also apply to any proposed development requiring a Special Permit. If there is any conflict between any of the following requirements and those in Article V of this Ordinance or in any other code, ordinance, or regulation, the more restrictive provision shall apply.
- B. No application for a Special Permit shall be approved unless it can be determined that the structure or activity will be located, constructed and maintained in a manner which will:
1. Fully protect the health and safety of the general public and any occupants of the structure. At a minimum, all new structures shall be designed, located, and constructed so that:
    - a. the structure will survive inundation by waters of the base flood without any lateral movement or damage to either the structure itself, or to any of its equipment or contents below the BFE.
    - b. the lowest floor (including basement) will be elevated to at least one and one half (1 ½) feet above base flood elevation.
    - c. the occupants of the structure can remain inside for an indefinite period of time and be safely evacuated at any time during the base flood.
  2. Prevent any significant possibility of pollution, increased flood levels or flows, or debris endangering life and property.

All hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical methods used correctly reflect currently accepted technical concepts. Studies, analyses, computations, etc. shall be submitted in sufficient detail to allow a thorough technical review by the *[Name of Municipality]* and the Department of Community and Economic Development.

### ARTICLE VII. EXISTING STRUCTURES IN IDENTIFIED FLOODPLAIN AREAS

#### Section 7.01 Existing Structures

The provisions of this Ordinance do not require any changes or improvements to be made to lawfully existing structures. However, when an improvement is made to any existing structure, the provisions of Section 7.02 shall apply.

## Section 7.02 Improvements

The following provisions shall apply whenever any improvement is made to an existing structure located within any Identified Floodplain Area:

- A. **OPTIONAL: No expansion or enlargement of an existing structure shall be allowed within any Identified Floodplain Area that would, together with all other existing and anticipated development, cause any increase in the BFE. For Zone A, BFE is determined using the methodology in Section 4.02.**
- B. No expansion or enlargement of an existing structure shall be allowed within any Identified Floodplain Area that would, together with all other existing and anticipated development, increase the BFE more than one (1) foot at any point.
- C. Any modification, alteration, reconstruction, or improvement of any kind to an existing structure to an extent or amount of fifty (50) percent or more of its market value, shall constitute a substantial improvement and shall be undertaken only in full compliance with the provisions of this Ordinance.
- D. Within any Identified Floodplain Area (See Section 4.02), no new construction or development shall be located within the area measured fifty (50) feet landward from the top-of-bank of any watercourse, unless a permit is obtained from the Department of Environmental Protection Regional Office.

The above activity shall also address the requirements of the 34 PA Code, as amended and the 2009 IBC and the 2009 IRC.

- E. **OPTIONAL: Any modification, alteration, reconstruction, or improvement of any kind to an existing structure, to an extent or amount of less than fifty (50) percent of its market value, shall be elevated and/or floodproofed to the greatest extent possible.**
- F. **OPTIONAL: Any modification, alteration, reconstruction, or improvement of any kind that meets the definition of “repetitive loss” shall be undertaken only in full compliance with the provisions of this ordinance. (Keep if Option 3.03 C was kept, delete if not).**

## ARTICLE VIII. VARIANCES

**NOTE:** If a municipality has a zoning hearing board (ZHB), applications for a variance regarding flood plain provisions, whether or not they are amended into the municipality’s zoning code, must be acted on by the zoning hearing board following MPC procedures for ZHB hearings, decisions, etc. See MPC 909.1(a)(5). If a municipality does not have a ZHB, they must establish a process by which to consider variance requests.

## Section 8.01 General

If compliance with any of the requirements of this Ordinance would result in an exceptional hardship to a prospective builder, developer or landowner, the *[Name of Municipality]* may, upon request, grant relief from the strict application of the requirements.

## Section 8.02 Variance Procedures and Conditions

Requests for variances shall be considered by the *[Name of Municipality]* in accordance with the procedures contained in Section 3.11 and the following:

- A. **OPTIONAL: No variance shall be granted for any construction, development, use, or activity within any floodplain area that would cause any increase in the BFE. For A zones, BFE is determined using the methodology in section 4.02.**
- B. No variance shall be granted for any construction, development, use, or activity within any Identified Floodplain Area that would, together with all other existing and anticipated development, increase the BFE by more than one (1) foot at any point in the community.
- C. Except for a possible modification of the regulatory flood elevation requirement involved, no variance shall be granted for any of the other requirements pertaining specifically to development regulated by Special Permit (or Prohibited Activities) (Article VI) or to Development Which May Endanger Human Life (Section 5.04).
- D. If granted, a variance shall involve only the least modification necessary to provide relief.
- E. In granting any variance, the *[Name of Municipality]* shall attach whatever reasonable conditions and safeguards it considers necessary in order to protect the public health, safety, and welfare, and to achieve the objectives of this Ordinance.
- F. In reviewing any request for a variance, the *[Name of Municipality]* shall consider, at a minimum, the following:
  1. That there is good and sufficient cause.
  2. That failure to grant the variance would result in exceptional hardship to the applicant.
  3. That the granting of the variance will
    - a. neither result in an unacceptable or prohibited increase in flood heights, additional threats to public safety, or extraordinary public expense,
    - b. nor create nuisances, cause fraud on, or victimize the public, or conflict with any other applicable state or local ordinances and regulations.
- G. Whenever a variance is granted, the *[Name of Municipality]* shall notify the applicant in writing that:



2. The granting of the variance may result in increased premium rates for flood insurance.
3. Such variances may increase the risks to life and property.

H. A complete record of all variance requests and related actions shall be maintained by the *[Name of Municipality]*. In addition, a report of all variances granted during the year shall be included in the annual report to the FEMA.

Notwithstanding any of the above, however, all structures shall be designed and constructed so as to have the capability of resisting the one-percent (1%) annual chance flood.

**NOTE:** In granting a variance, municipalities are held to the standard provided in 44 CFR 60.6. If a variance is granted erroneously, a municipality remains liable for failing to meet the minimum standards of the National Flood Insurance Program.

## ARTICLE IX. DEFINITIONS

### Section 9.01 General

Unless specifically defined below, words and phrases used in this Ordinance shall be interpreted so as to give this Ordinance its most reasonable application.

### Section 9.02 Specific Definitions

1. Accessory use or structure - a use or structure on the same lot with, and of a nature customarily incidental and subordinate to, the principal use or structure.
2. Base flood - a flood which has a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood" or 1% annual chance flood).
3. Base flood discharge - the volume of water resulting from a Base Flood as it passes a given location within a given time, usually expressed in cubic feet per second (cfs).
4. Base flood elevation (BFE) - the elevation shown on the Flood Insurance Rate Map (FIRM) for Zones AE, AH, A1-30 that indicates the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.
5. Basement - any area of the building having its floor below ground level on all sides.
6. Building - a combination of materials to form a permanent structure having walls and a roof. Included shall be all manufactured homes and trailers to be used for human habitation.
7. Development - any man-made change to improved or unimproved real estate, including but not limited to the construction, reconstruction, renovation, repair, expansion, or alteration of buildings or other structures; the placement of manufactured homes; streets, and other paving; utilities; filling, grading and excavation; mining; dredging; drilling operations; storage of equipment or materials; and the subdivision of land.

8. Existing manufactured home park or subdivision – a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.
9. Expansion to an existing manufactured home park or subdivision – the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).
10. Flood - a temporary inundation of normally dry land areas.
11. Flood Insurance Rate Map (FIRM) - the official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.
12. Flood Insurance Study (FIS) - the official report provided by the Federal Emergency Management Agency that includes flood profiles, the Flood Insurance Rate Map, the Flood Boundary and Floodway Map, and the water surface elevation of the base flood.
13. Floodplain area - a relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, river or watercourse; and/or any area subject to the unusual and rapid accumulation of surface waters from any source.
14. Floodproofing - any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.
15. Floodway - the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.
16. Highest Adjacent Grade: The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
17. Historic structures – any structure that is:
  - a. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
  - b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
  - c. Individually listed on a state inventory of historic places in states which have been approved by the Secretary of the Interior; or

- d. Individually listed on a local inventory of historic places in communities with historic preservation that have been certified either:
  - i. By an approved state program as determined by the Secretary of the Interior or
  - ii. Directly by the Secretary of the Interior in states without approved programs.
- 18. Lowest floor - the lowest floor of the lowest fully enclosed area (including basement). An unfinished, flood resistant partially enclosed area, used solely for parking of vehicles, building access, and incidental storage, in an area other than a basement area is not considered the lowest floor of a building, provided that such space is not designed and built so that the structure is in violation of the applicable non-elevation design requirements of this ordinance.
- 19. Manufactured home - a structure, transportable in one or more sections, which is built on a permanent chassis, and is designed for use with or without a permanent foundation when attached to the required utilities. The term includes park trailers, travel trailers, recreational and other similar vehicles which are placed on a site for more than 180 consecutive days.
- 20. Manufactured home park or subdivision – a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.
- 21. Minor repair - the replacement of existing work with equivalent materials for the purpose of its routine maintenance and upkeep, but not including the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the exitway requirements; nor shall minor repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, oil, waste, vent, or similar piping, electric wiring, mechanical or other work affecting public health or general safety.
- 22. New construction - - structures for which the start of construction commenced on or after *[the effective start date of this ordinance adopted by the community]* and includes any subsequent improvements to such structures. Any construction started after *[effective date of community's first floodplain management ordinance adopted by the community]* and before *[effective start date of this floodplain management ordinance]* is subject to the ordinance in effect at the time the permit was issued, provided the start of construction was within 180 days of permit issuance.
- 23. New manufactured home park or subdivision – a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.
- 24. Person - an individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever,

which is recognized by law as the subject of rights and duties.

25. Post-FIRM Structure - is a structure for which construction or substantial improvement occurred after December 31, 1974 or on or after the community's initial Flood Insurance Rate Map (FIRM) dated MM/DD/YYYY, whichever is later, and, as such, would be required to be compliant with the regulations of the National Flood Insurance Program.
26. Pre-FIRM Structure - is a structure for which construction or substantial improvement occurred on or before December 31, 1974 or before the community's initial Flood Insurance Rate Map (FIRM) dated MM/DD/YYYY, whichever is later, and, as such, would not be required to be compliant with the regulations of the National Flood Insurance Program.
27. Recreational vehicle - a vehicle which is:
  - a. built on a single chassis;
  - b. not more than 400 square feet, measured at the largest horizontal projections;
  - c. designed to be self-propelled or permanently towable by a light-duty truck,
  - d. not designed for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
28. Regulatory flood elevation - the base flood elevation (BFE) or estimated flood height as determined using simplified methods plus a freeboard safety factor of one and one-half (1 ½) feet.

**NOTE:** The one and one-half (1 ½) foot freeboard is an alternative to the basic NFIP elevation requirement. Municipalities are free to establish freeboard requirements based on existing conditions, historical data, etc.

29. Repetitive loss – flood related damages sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on *average*, equals or exceeds 25 percent of the market value of the structure before the damages occurred.

**NOTE:** Include this definition when optional provisions for repetitive loss (Sections 3.03 C and 7.02 F) are used.

30. Special permit - a special approval which is required for hospitals, nursing homes, jails, and new manufactured home parks and subdivisions and substantial improvements to such existing parks, when such development is located in all, or a designated portion of a floodplain.
31. Special flood hazard area (SFHA) - means an area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. It is shown on the FIRM as Zone A, AO, A1-A30, AE, A99, or, AH.

32. Start of construction - includes substantial improvement and other proposed new development and means the date the Permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days after the date of the permit and shall be completed within twelve (12) months after the date of issuance of the permit unless a time extension is granted, in writing, by the Floodplain Administrator. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufacture home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.
33. Structure – a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.
34. Subdivision - the division or redivision of a lot, tract, or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs, or devisees, transfer of ownership or building or lot development: Provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.
35. Substantial damage - damage from any cause sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent or more of the market value of the structure before the damage occurred.
36. Substantial improvement - any reconstruction, rehabilitation, addition, or other improvement of a structure, of which the cost equals or exceeds fifty (50) percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage" (*or "repetitive loss" when a repetitive loss provision is used*) regardless of the actual repair work performed. The term does not, however, include any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions.

Historic structures undergoing repair or rehabilitation that would constitute a substantial improvement as defined in this ordinance, must comply with all ordinance requirements that do not preclude the structure's continued designation as a historic structure. Documentation that a specific ordinance requirement will cause removal of the structure from the National

Register of Historic Places or the State Inventory of Historic places must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from ordinance requirements will be the minimum necessary to preserve the historic character and design of the structure.

37. Uniform Construction Code (UCC) – The statewide building code adopted by The Pennsylvania General Assembly in 1999 applicable to new construction in all municipalities whether administered by the municipality, a third party or the Department of Labor and Industry. Applicable to residential and commercial buildings, The Code adopted The International Residential Code (IRC) and the International Building Code (IBC), by reference, as the construction standard applicable with the State floodplain construction. For coordination purposes, references to the above are made specifically to various sections of the IRC and the IBC.
38. Violation – means the failure of a structure or other development to be fully compliant with the community’s floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in 44 CFR §60.3(b)(5), (c)(4), (c)(10), (d)(3), €(2), €(4), or €(5) is presumed to be in violation until such time as that documentation is provided.

ARTICLE X. ENACTMENT

Section 10.01 Adoption

This Ordinance shall be effective on *[choose either map effective date or any date that precedes the map effective date, including adoption date, five days after adoption date, etc.]* and shall remain in force until modified, amended or rescinded by *[Name of Municipality], [County], Pennsylvania.*

ENACTED AND ADOPTED by the *[Board, Council, etc.]* this \_\_\_\_ day of \_\_\_\_\_,  
\_\_\_\_\_.

ATTEST: *[BOARD, COUNCIL, ETC.] OF THE [NAME OF MUNICIPALITY]*

\_\_\_\_\_  
*[Name of Municipality] Secretary*                      By: \_\_\_\_\_  
*[Board, Council, etc.] President*

APPROVED, this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by the Mayor *[Name of Municipality]*

ATTEST:

\_\_\_\_\_  
*[Name of Municipality] Secretary*                      \_\_\_\_\_  
*[Name of Municipality] Mayor*