

**MONROE COUNTY CONSERVATION DISTRICT
MODEL FLOODPLAIN MANAGEMENT STANDARDS**

PROPOSED AS A STAND-ALONE ORDINANCE

§xxx Floodplain Management

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§xxx Floodplain Management

This Ordinance shall apply to all new construction, development, and improvements, including the placement of fill material, in any identified floodplain area.

xxx.1 Statutory Authorization

The Legislature of the Commonwealth of Pennsylvania has, by the passage of the Pennsylvania Floodplain 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 of the Township/Borough**, does hereby order as follows.

xxx.2 General Provisions

- A. Intent - This Ordinance is intended to:
 - 1. Promote the general health, welfare, and safety of the community.
 - 2. Encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future.
 - 3. Minimize danger to public health by protecting water supply and natural drainage.
 - 4. Reduce financial burdens imposed on the community, its governmental units, and its residents by preventing excessive development in areas subject to flooding.
 - 5. Maintain the existing hydrologic regime through the sound management of floodplains for their capacity to convey, transport, store and dissipate flood flow volumes and velocities, to protect water quality and to maintain stream channel stability.

- B. Applicability

1. 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.
 2. A Permit shall not be required for minor repairs to existing buildings or structures.
- C. 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 acceptable 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 **Township/Borough** or any officer or employee thereof for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made thereunder.
- D. 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.
- E. 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.

xxx.3 Administration

- A. Designation of the Floodplain Administrator – The **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.
- B. Permits Required – A permit shall be required before any construction or development is undertaken within any area of the **Township/Borough**.
- C. Duties and Responsibilities of the Floodplain Administrator
1. 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.
 2. Prior to the issuance of any permit, the Floodplain Administrator shall review the application for the permit 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, §404, 33, U.S.C. 1344. No permit shall be issued until this determination has been made.

3. In the case of existing structures, prior to the issuance of any Development/Building 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.
4. 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.
5. 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.
6. 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** for whatever action is considered necessary.
7. 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.
8. The Floodplain Administrator is the official responsible for submitting a biennial report to the FEMA concerning community participation in the National Flood Insurance Program.
9. The Floodplain Administrator shall consider the requirements of the 34 PA Code and the 2009 IBC and the 2009 IRC or latest revisions thereof.

D. Application Procedures and Requirements

1. Application for such a Permit shall be made, in writing, to the Floodplain Administrator on forms supplied by the **Township/Borough**. Such application shall contain the following:
 - a. Name and address of applicant.
 - b. Name and address of owner of land on which proposed construction is to occur.
 - c. Name and address of contractor.
 - d. Site location including address.
 - e. Listing of other permits required.

- f. 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.
 - g. A plan of the site showing the exact size and location of the proposed construction as well as any existing buildings and structures.
2. 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:
 - a. 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;
 - b. all utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
 - c. adequate drainage is provided so as to reduce exposure to flood hazards.
 - d. structures will be anchored to prevent flotation, collapse, or lateral movement.
 - e. building materials are flood resistant
 - f. appropriate practices that minimize flood damage have been used.
 - g. electrical, heating, ventilation, plumbing, air conditioning equipments, and other service facilities have been designed and/or located to prevent water entry or accumulation.
3. 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:
 - a. A completed Permit Application Form.
 - b. 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) topographic contour lines, if available;
 - 3) the location of all existing and proposed buildings, structures, and other improvements, including the location of any existing or proposed subdivision and development;
 - 4) the location of all existing streets, drives, and other access ways; and
 - 5) the location of any existing bodies of water or watercourses, identified floodplain areas, limits of earth disturbance, and, if available, information pertaining to the floodway, and the flow of water including direction and velocities.

- c. Plans of all proposed buildings, structures and other development, drawn at suitable scale showing the following:
 - 1) the proposed lowest floor elevation of any proposed building based upon North American Vertical Datum of 1988;
 - 2) the elevation of the base flood;
 - 3) supplemental information as may be necessary under 34 PA Code, the 2009 IBC or the 2009 IRC.
- d. The following data and documentation:
 - 1) if available, information concerning flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood; and
 - 2) documentation, certified by a registered professional engineer, to show that the cumulative effect of any proposed development within an AE Area without floodway when combined with all other existing and anticipated development, will not increase the base flood elevation more than one (1) foot at any point.
 - 3) a 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.
 - 4) detailed information needed to determine compliance with §xxx.13.J, Storage, and §xxx.6.D.7, Development Which May Endanger Human Life, including:
 - i. the amount, location and purpose of any materials or substances referred to in §xxx.13.J and §xxx.6.D.7 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 §xxx.6.D.7 during a base flood.
 - 5) the appropriate component of the Department of Environmental Protection's "Planning Module for Land Development."
 - 6) 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 and stormwater management.
4. 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 Administration.
- E. Review by County Conservation District – 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 incorporation into the proposed plan.

- F. 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.
- G. 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.
- H. 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.
- I. 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 manufactured 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 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.

J. Enforcement

1. 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:

- a. be in writing;
- b. include a statement of the reasons for its issuance;

- c. allow a reasonable time not to exceed a period of thirty (30) days for the performance of any act it requires;
- d. 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;
- e. contain an outline of remedial action which, if taken, will effect compliance with the provisions of this Ordinance.

2. 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 **Township/Borough**, of not less than \$_____ nor more than \$_____ 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 and 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/Zoning Hearing Board/etc.** to be a public nuisance and abatable as such.

K. Appeals

1. 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.
2. 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.
3. 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 Floodplain Management Act.

xxx.4 **Basic Development Standard**

In designated floodplain areas, only the following types of activities/development will be permitted:

- A. Activities/Development that are compatible with maintaining the existing hydrologic regime and do not alter the cross sectional dimension of the floodplain and its storage capacity.
- B. Activities/Development permitted under Title 25, Chapter 105 of the Pennsylvania Code, or conveyances required by Title 25, Chapter 102.

C. Activities/Development specifically authorized by this §xxx.

xxx.5 Identification of Floodplain Areas

A. Identification - The identified floodplain area shall be:

1. Any areas of the **Township/Borough**, classified as a special flood hazard area (SFHA) 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,
2. Any Community Identified Flood Hazard Areas.

The above referenced FIS and FIRMs, and any subsequent revisions and amendments are hereby adopted by **Township/Borough** and declared to be a part of this ordinance.

B. Description of Identified Floodplain Areas - The identified floodplain area shall consist of the following specific areas:

1. Floodway Area - shall be those areas identified as Floodway on the FIRM as well as those floodway areas which have been identified in other available studies or sources of information for those AE areas where no floodway has been identified in the FIS. The floodway represents the channel of a watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation by more than one (1) foot at any point.
2. AE Area without floodway - shall be those areas identified as an AE Zone on the FIRM included in the FIS prepared by FEMA and for which base flood elevations have been provided in the FIS but no floodway has been delineated.
3. A Area - 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 source 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.

4. Community Identified Flood Hazard Areas - shall be those areas where the **Township/Borough** 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.

- C. Changes in Identification of Area - The identified floodplain area, including any Community Identified Flood Hazard Areas (**if applicable to municipality**), may be revised or modified by the **Township/Borough** 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 the Federal Emergency Management Agency (FEMA). Additionally, as soon as practicable, but not later than six (6) months after the date such information becomes available, a community shall notify the FEMA of changes to the Special Flood Hazard Area by submitting technical or scientific data.
- D. Boundary Disputes - Should a dispute concerning any identified floodplain boundary arise, an initial determination shall be made by the **Township/Borough** 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.

xxx.6 Prohibited Development

In identified floodplain areas, the following shall be prohibited:

- A. Buildings - All walled and roofed buildings.
- B. Any new construction or development that will in any manner retard, divert or alter the natural flow of flood waters on the site except activities permitted by the Pennsylvania Department of Environmental Protection under Title 25, Chapter 105 of the Pennsylvania Code, or conveyances required by Title 25, Chapter 102. (See definition of *development*.)
- C. Floodway – No new construction or development shall be permitted in any floodway area or, in the absence of a floodway area, within the area measured fifty (50) feet landward from the top-of-bank of any watercourse.
- D. Developments of Special Concern
1. 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 shall be prohibited:
 - a. Hospitals
 - b. Nursing homes
 - c. Jails or prisons
 2. 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.
 3. Recreational Vehicles - the long-term parking (≥ 180 consecutive days) if not fully licensed and ready for highway use.
 4. Fill – The placement of fill material that is not associated with a permitted activity.
 5. Sewage Disposal - On-lot or community subsurface sewage disposal systems.

6. Structures associated with mining or oil and gas production, ie. water storage, fluid containment, or well pads.
7. Any type of development or activity shall be prohibited which will be used for the production or storage of any of the following dangerous materials or substances; or, which will be used for any activity requiring the maintenance of a supply of more than five hundred and fifty (550) gallons, or other comparable volume, of any of the following dangerous materials or substances on the premises; or, which will involve the production, storage, or use of any amount of radioactive substances. The following list of materials and substances are considered dangerous to human life:
 - a. Acetone
 - b. Ammonia
 - c. Benzene
 - d. Calcium carbide
 - e. Carbon disulfide
 - f. Celluloid
 - g. Chlorine
 - h. Hydrochloric acid
 - i. Hydrocyanic acid
 - j. Magnesium
 - k. Nitric acid and oxides of nitrogen
 - l. Petroleum products (gasoline, fuel oil, etc.)
 - m. Phosphorus
 - n. Potassium
 - o. Sodium
 - p. Sulphur and sulphur products
 - q. Pesticides (including insecticides, fungicides, and rodenticides)
 - r. Radioactive substances, insofar as such substances are not otherwise regulated
 - s. Any other substance as determined by the **Township/Borough**.

xxx.7 Permitted Activities/Development

The following activities/development are permitted in identified floodplain areas provided such activity/development does not involve any activity/development prohibited by §xxx.6:

- A. Agricultural activities.
- B. Plant nurseries.
- C. Forestry and seed production.
- D. Fish hatcheries.
- E. Parking lots constructed to existing grade.
- F. Temporary fairs or carnivals.
- G. Accessory uses for residential purposes.
- H. Private sportsmen's club activities (for example, archery, hunting, horse shoes etc.).
- I. Athletic facilities.
- J. Orchards.
- K. Wildlife sanctuaries.
- L. Boat launch sites constructed to existing grade.
- M. Stormwater conveyance and stormwater management facilities for water quality as outlined in the **Township/Borough** Stormwater Management Ordinance (Act 167).
- N. Recreational vehicles meeting one or more of the following criteria:

1. Must be on the site for fewer than 180 consecutive days, or
2. must be fully licensed and ready for highway use.

xxx.8 Unspecified Activities/Development

Any activity/development not expressly permitted in §xxx.7 shall only be permitted by variance and shall be undertaken only in full compliance with §xxx.12 and §xxx.13. However, no activity/development shall be permitted which involves any activity/development expressly prohibited by §xxx.6.D.

xxx.9 Watercourses; Stream Banks

A. Alteration or Relocation of Watercourse

1. Alteration or Relocation of Watercourse - No encroachment, alteration, improvement or development of any kind shall be made to any watercourse until all adjacent municipalities which may be affected by such action, the Federal Emergency Management Agency, and the Pennsylvania Department of Community and Economic Development have been notified in writing by the applicant by certified mail, and until all required permits or approvals have been first obtained from the Department of Environmental Protection, Northeast Regional Office, and other applicable agencies. The applicant shall provide the **Township/Borough** with proof of the required notifications and copies of any responses.

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.

2. Restoration of Unstable Stream Banks - No stream bank restoration or stabilization projects shall be undertaken until the applicant provides a detailed report addressing the fluvial geomorphology of stable reaches above and below the unstable reach. Any restoration or stabilization project shall include all necessary measures to ensure the maintenance of stability in the adjacent stable reaches of the stream channel.

- B. Technical or scientific data shall be submitted by (**choose either the municipality or the applicant**) to FEMA for a Letter of Map Revision (LOMR) as soon as practicable but within six (6) months of the completion of any new construction, development or other activity resulting in changes in the base flood elevation. The situations when a LOMR or a Conditional Letter of Map Revision (CLOMR) are required are:

1. Any development that causes a rise in the base flood elevations within the floodway; or
2. Any development occurring in Zone AE without a designated floodway, which will cause a rise of more than one foot in the base flood elevation; or
3. Alteration or relocation of a stream (including but not limited to installing culverts and bridges).

xxx.10 Existing Structures in Floodplain Area

The provisions of this §xxx do not require any changes or improvements to be made to lawfully existing structures. However, when an improvement is made to any existing structure in the identified floodplain area, the following provisions shall apply:

- A. Expansions - Any substantial improvement to an existing structure which results in the horizontal expansion of the structure shall be prohibited.
- B. Floodways - No vertical expansion or enlargement of an existing structure shall be allowed within any floodway area that would cause any increase in the base flood elevation.
- C. AE Area without floodway – No vertical expansion or enlargement of an existing structure shall be allowed within any AE Area without floodway that would, together with all other existing and anticipated development, increase the BFE more than one (1) foot at any point.
- D. AE Area without floodway and A Area – No permitted expansion or enlargement of an existing structure shall be allowed within fifty (50) feet landward from the top-of-bank of any watercourse within any AE Area which lacks a designated floodway or within any A Area unless necessary permits are obtained from the Department of Environmental Protection Regional Office.
- E. Danger to Human Life - No modification, alteration, reconstruction, or improvement of any kind to an existing structure shall be permitted which involves any activity which may endanger human life as listed in §xxx.6.D.7.
- F. 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.
- G. 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 to the greatest extent possible.
- H. Any modification, alteration, reconstruction, or improvement of any kind that meets the definition of “repetitive loss” shall only be permitted by variance and shall be undertaken only in full compliance with §xxx.12 and §xxx.13.
- I. The above activity shall also address the requirements of the 34PA Code, as amended and the 2009 IBC and the 2009 IRC.

xxx.11 Existing Lots or Parcels of Record and Newly Created Lots or Parcels

- A. Existing Lots or Parcels of Record - In the case where an existing lot or parcel of record is located wholly within an identified floodplain area, or where the useable area of a lot or parcel partially within any identified floodplain area is found to be inadequate for the proposed development, any prohibited development listed in §xxx.6 may only be permitted by variance in accord with §xxx.12.
- B. Newly Created Lots or Parcels
 - 1. After the effective date of this §xxx, every lot or parcel created for development purposes shall contain an area adequate for the proposed use outside of an identified floodplain area, except as provided in §2 below. The subdivision plan and deed for any such lot or parcel shall include a restriction that the lot or parcel shall not be used for any development which

does not comply with the **Township/Borough** floodplain regulations in effect when such development is proposed.

2. After the effective date of this §xxx, the subdivision plan and deed for any lot or parcel created for non-development purposes (e.g., forestry or agriculture) which contains any identified floodplain area shall include a restriction that the lot or parcel shall not be used for any development which does not comply with the **Township/Borough** floodplain regulations in effect when such development is proposed.
3. No variance shall be granted for any development in any identified floodplain area contained within any lot or parcel created after the effective date of this §xxx. No variance shall be granted for any development in any identified floodplain area contained on any development plans submitted, after the effective date of this §xxx.
4. All subdivision 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 or Letter of Map Revision. Submittal requirements and processing fees shall be the responsibility of the applicant.

xxx.12 Variances

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

Requests for variances shall be considered by the **Township/Borough** in accordance with the procedures contained in §xxx.3.K and the following:

- A. Alternatives Analysis – No variance shall be granted until the applicant has performed an alternatives analysis to find practicable alternatives to development in the identified floodplain area.
- B. Floodway - No variance shall be granted for any construction, development, use, or activity within any floodway area that would cause any increase in the BFE. Where a variance may be granted, necessary permits shall be obtained from the Department of Environmental Protection Regional Office. Within any floodway area, no encroachments, including fill, new construction, substantial improvements, or other development shall be permitted unless it has been demonstrated through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.
- C. AE Area without floodway - No variance shall be granted for any construction, development, use, substantial improvement or activity within any AE Area without floodway that would, together with all other existing and anticipated development, increase the BFE greater than one (1) foot at any point.

- D. AE Area without floodway and A Area – No variance shall be granted for any construction, development, use, substantial improvement or activity within fifty (50) feet landward from the top-of-bank of any watercourse within any AE area which lacks a designated floodway or within any A Area unless necessary permits are obtained from the Department of Environmental Protection Regional Office.
- E. Elevation Required - Any building permitted by variance shall be elevated to the regulatory flood elevation. Within any identified flood plain area, any new construction or substantial improvement of a residential structure or non-residential structure shall have the lowest floor (including basement) elevated up to, or above, the regulatory flood elevation. The regulatory flood elevation is defined as the BFE plus a freeboard safety factor of one and one-half (1½) feet. In A Zones, the regulatory flood elevation shall be determined in accordance with §xxx.5.B.3.
- F. Design and Construction Standards - Any development permitted by variance shall comply with the requirements of §xxx.13 and all other applicable requirements of the National Flood Insurance Program.
- G. Substantial Improvements - The **Township/Borough** may grant a variance to the prohibition of substantial improvements to existing structures in identified floodplain areas provided all requirements of this §xxx.12 are satisfied.
- H. Developments of Special Concern - No variance shall be granted for any development of special concern identified in §xxx.6.D.
- I. Newly Created Lots or Parcels - No variance shall be granted for any development in any identified floodplain area contained within any lot or parcel created after the effective date of this §xxx. No variance shall be granted for any development in any identified floodplain area contained on any development plans submitted, after the effective date of this §xxx.
- J. Least Modification - If granted, a variance shall involve only the least modification necessary to provide relief.
- K. Conditions - In granting any variance, the **Township/Borough** 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.
- L. Written Notice - Whenever a variance is granted, the **Township/Borough** shall notify the applicant in writing that:
1. The granting of the variance may result in increased premium rates for flood insurance.
 2. Such variances may increase the risks to life and property.
- M. Review Factors - In reviewing any request for a variance, the **Township/Borough** shall consider that the granting of the variance will not:
1. Result in an unacceptable or prohibited increase in flood heights, additional threats to public safety, or extraordinary public expense,

2. Create nuisances, cause fraud on, or victimize the public, or conflict with any other applicable state or local ordinances and regulations.

N. Record - A complete record of all variance requests and related actions shall be maintained by the **Township/Borough**. In addition, a report of all variances granted during the year under this §xxx.12 shall be included in the annual report to the FEMA.

xxx.13 Design and Construction Standards

The following minimum standards, in addition to all applicable National Flood Insurance Program requirements, shall apply to any construction and development approved within any identified floodplain area:

A. Residential and Non-Residential Structures

1. In AE 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, 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 §xxx.5.B.3 of this ordinance.
3. 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. 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, etc. or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

C. Manufactured Homes – 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 one and one half (1 ½) feet above the base flood elevation.

3. anchored to resist flotation, collapse, or lateral movement.

Installation of manufactured homes shall be done in accordance with the manufacturer's 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 Code Chapter 401-405.

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/or applicable to units where the manufacturer's standards for anchoring cannot be provided or were not established for the unit's proposed installation.

D. Accessory Structures - Structures accessory to a principal building need not be elevated to remain dry, but shall comply, at a minimum, with the following requirements:

1. 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.
2. floor area shall not exceed 100 square feet.
3. the structure shall have a low damage potential.
4. the structure shall be located on the site so as to cause the least obstruction to the flow of flood waters.
5. power lines, wiring, and outlets will be elevated to the regulatory flood elevation.
6. permanently affixed utility equipment and appliances such as furnaces, heaters, washers, dryers, etc. are prohibited.
7. sanitary facilities are prohibited.
8. the structure shall be adequately anchored to prevent flotation or movement and shall be designed to automatically provide for the entry and exit of flood water 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.

E. Fill - If fill is used, it shall:

1. extend laterally at least fifteen (15) feet beyond the building line from all points;
 2. consist of soil or small rock materials only - sanitary landfills shall not be permitted;
 3. be compacted to provide the necessary permeability and resistance to erosion, scouring, or settling;
 4. 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,
 5. be used to the extent to which it does not adversely affect adjacent properties.
- F. Drainage Facilities - Storm drainage facilities shall be designed to convey the flow of storm water runoff in a safe and efficient manner in accordance with all applicable **Township/Borough** storm water control requirements. The system shall insure 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.
- G. 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.
- H. 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.
- I. Streets - The finished elevation of all new streets shall be no more than one (1) foot below the Regulatory Flood Elevation.
- J. 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 §xxx.6.D.7, shall be stored at or above the Regulatory Flood Elevation.
- K. 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.
- L. 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.

M. 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.

N. 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.

O. 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.

P. 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.

Q. 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.

R. 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/or 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.

xxx.14 Definitions

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

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.

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”).

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.

Basement: Any area of the building having its floor below ground level on all sides.

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.

Completely Dry Space: A space which will remain totally dry during flooding; the structure is designed and constructed to prevent the passage of water and water vapor.

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.

Essentially Dry Space: A space which will remain dry during flooding, except for the passage of some water vapor or minor seepage; the structure is substantially impermeable to the passage of water.

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.

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).

Flood: A temporary inundation of normally dry land areas.

Flood Insurance Rate Map: The official map on which the Federal Emergency Management Agency has delineated both the areas of special hazards and the risk premium zones applicable to the community.

Flood Insurance Study: 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.

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.

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.

Historic Structure: Any structure that is any of the following:

1. 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.
2. 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.
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior.
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states without approved programs.

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.

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.

Manufactured Home Park: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

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 exit-way 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 or mechanical or other work affecting public health or general safety.

New Construction: Structures for which the start of construction commenced on or after [**effective start date of this floodplain management ordinance**] 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.

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.

Practicable Alternative: An alternative that is available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.

Recreational Vehicle: A vehicle which is (i) built on a single chassis; (ii) not more than 400 square feet, measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light-duty truck; (iv) not designed for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Regulatory Flood Elevation: The base flood elevation (BFE) plus a freeboard safety factor of one and one-half (1½) feet.

Repetitive Loss: Flood related damages sustained by a structure on two separate occasions 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.

Special Flood Hazard Area (SFHA): 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.

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 from 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 manufactured 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.

Stream: See *watercourse*.

Structure: Anything constructed or erected on the ground or attached to the ground including, but not limited to buildings, sheds, manufactured homes, fences, walls, storage tanks, and other similar items. This term includes any man-made object having an ascertainable stationary location on or in land or water whether or not affixed to land.

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.

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" 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.

Violation: 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 certificates, or other evidence of compliance required in 44 CFR §60.3(b)(5), (c)(4), (c)(10), (d)(3), (e)(2), (e)(4), or (e)(5) is presumed to be in violation until such time as that documentation is provided.

Watercourse: Any channel of conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial, intermittent or seasonal flow.

xxx.15 Enactment

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]**, Monroe County, Pennsylvania.

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

ATTEST:

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

[Name of Municipality] Secretary

By: _____
[Board, Council, etc.] President

APPROVED, this **[day]** day of **[month]**, **[year]**, by the Mayor **[Name of Municipality]**

ATTEST:

[Name of Municipality] Secretary

Mayor

- - - end - - -