

Chapter 17

Natural Hazard Areas

Part 1

Natural Hazard Areas

- §17-101. Purpose
- §17-102. Flood Prone Areas
- §17-103. Steep Slopes and Slide Hazard Areas

Part 1**Natural Hazard Areas****§17-101. Purpose.**

The purpose of this Part is to protect persons and property from undue and unnecessary exposure to natural conditions and locations which will result in threats to their health and safety, and damage and/or destruction.

(Ord. 1-2004, 6/21/2004)

§17-102. Flood Prone Areas.

No building or structures shall be built nor development undertaken in any area found or designated hereafter as flood prone except as a special exception subject to the requirements of this Chapter and approval of the Zoning Hearing Board. All new construction within flood hazard areas shall comply with the most current Federal Insurance Administration regulations.

A. Flood Prone Area Supplementary Definitions.

Development—any man-made change to improved or unimproved real estate including but not limited to buildings or other structures, the placement of mobile homes, streets, and other paving, utilities, filling, grading, excavation, mining, dredging, or drilling operations and the subdivision of land.

Flood—a temporary inundation of normally dry land areas.

Floodplain—

(a) A relatively flat or low land area adjoining a river, stream, or watercourse which is subject to partial or complete inundation.

(b) An area subject to the unusual and rapid accumulation or runoff of surface waters from any source.

Floodplain districts—those floodplain districts specifically designated in paragraph .B below.

100-year flood—a flood that, on the average, is likely to occur once every 100 years (i.e., that has a 1% chance of occurring each year, although the flood may occur in any year).

Regulatory flood elevation—the 100-year flood elevation plus a freeboard safety factor of 1½ feet.

Substantial Improvement—any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either:

(a) Before the improvement or repair is started.

(b) If the structure has been damaged, and is being restored, before the damage occurred.

For the purposes of this definition “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the

external dimensions of the structure. The term does not, however, include either:

(a) Any project for improvement of a structure to comply with existing State or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions.

(b) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

B. *Delineation.*

(1) For the purposes of this Chapter, the areas considered to be flood-prone within the Township shall be those areas identified as being subject to the 100-year flood in the Flood Insurance Study prepared for the Township by the Federal Insurance Administration dated January 16, 1980.

(2) A map showing all areas considered to be flood-prone is available for inspection at the Township offices. For the purposes of this Chapter the following nomenclature is used in referring to the various kinds of flood-prone areas:

(a) The Floodway Area (FW) is delineated for purposes of this Chapter using the criteria that a certain area within the floodplain must be capable of carrying the waters of the 100-year flood without increasing the water surface elevation of that flood more than 1 foot at any point. The areas included in this area are specifically defined in the Floodway Data Table of the above referenced Flood Insurance Study and shown on the accompanying Flood Boundary and Floodway Map.

(b) The Flood-Fringe Area (FF) shall be that area of the 100-year floodplain not included in the Floodway District. The basis for the outermost boundary of this Area shall be the 100-year flood elevations contained in the flood profiles of the above referenced Flood Insurance Study. (FIS) and as shown on the accompanying Flood Boundary and Floodway Map.

(c) The General Floodplain Area (FA) shall be that floodplain area for which no detailed flood profiles and elevations are provided. Such areas are shown on the Maps accompanying the FIS prepared by the FIA. In determining the necessary elevations for the purposes of this Chapter, other sources of data may be used such as:

- 1) Corps of Engineers—floodplain information reports.
- 2) U. S. Geological Survey—flood prone quadrangles.
- 3) USDA, Soil Conservation Service—County soil surveys (alluvial soils).
- 4) Known highwater marks from past floods.
- 5) Other sources.

(3) The areas considered to be flood-prone may be revised or modified by the Township where studies or information provided by a qualified agency or person documents the need or possibility for such revision.

(4) No modification or revision of any area identified as being flood prone

in the flood insurance study prepared by the Flood Insurance Administration shall be made without prior approval from the Federal Insurance Administration.

C. *Use of Flood Prone Areas.*

(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 Township, and until all required permits or approvals have been first obtained from the Department of Environmental Protection.

(2) Within any designated Floodway (FW) Area, no new construction, development, use, activity, or encroachment of any kind, shall be allowed, except where the rise in flood heights caused by the proposed development is fully offset by accompanying improvements.

(3) Within any designated Flood-fringe (FF) Area or General Floodplain (FA) Area, new construction and other development, uses and activities shall be allowed, provided that they are undertaken in strict compliance with the provisions contained in this Chapter and any other applicable codes, ordinances and regulations.

D. *Design and Construction Standards.* The following minimum standards shall apply for all construction proposed to be undertaken within any flood-prone area:

(1) *Residential Structures.* Within any FW, FF, or FA area, the lowest floor (including basement) of any new or substantially improved residential structures shall be at least 1½ feet above the 100-year flood elevation.

(2) *Nonresidential structures.* Within any FW, FF, or FA area, the lowest floor (including basement) or any new or substantially improved nonresidential structure shall be at least 1½ feet above the 100-year flood elevation, or be designed and constructed so that the space enclosed by such structure shall remain either completely or essentially dry during any flood up to that height. Any structure, or part thereof, which will not be completely or adequately elevated, shall be designed and constructed to be completely or essentially dry in accordance with the standards contained in the publication entitled "Flood-proofing Regulations" (U.S. Army Corps of Engineers, June 1972), or some other equivalent standard, for that type of construction.

(3) *Fill.* No earth, rocks, or other fill material nor any physical barrier shall be built or placed in the designated flood prone area except as found by the Zoning Hearing Board to be in the better common good of the residents of Covington Township.

(4) *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 insure drainage at all points 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.

(5) *Sanitary Sewer Facilities.* All new or replacement sanitary sewer facilities, and private package sewage treatment plants (including all pumping

stations and collector systems) shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into the flood waters. In addition, they should be located and constructed to minimize or eliminate flood damage and impairment.

(6) *Water Facilities.* All new or replacement water facilities shall be designed to minimize or eliminate infiltration of flood waters into the system, and be located and constructed to minimize or eliminate flood damages.

(7) *Utilities.* All utilities such as gas lines, electrical and telephone systems being placed in identified flood-prone areas should be located, elevated (where possible) and constructed to minimize the chance of impairment during a flood.

(8) *Storage.* No materials that are buoyant, flammable, explosive, or in times of flooding, could be injurious to human, animal, or plant life, shall be stored below the regulatory flood elevation.

(9) *Anchoring.* All buildings and structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse, or lateral movement. 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.

(10) *Electrical Systems and Components.* Electric water heaters, furnaces, air conditioning and ventilating systems, and other electrical equipment or apparatus shall not be located below the regulatory flood elevation. Electrical distribution panels shall be at least three feet above the 100-year flood elevation. Separate electrical circuits shall serve lower levels and shall be dropped from above.

(11) *Plumbing.* Water heaters, furnaces, and other mechanical equipment or apparatus shall not be located below the regulatory flood elevation. Water supply systems and sanitary sewage systems shall be designed to prevent the infiltration of flood waters into the system and discharges from the system into flood waters. 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.

(12) *On-site Sewage Disposal.* All on-site sewage disposal systems or parts thereof being placed in identified flood-prone areas should be located to avoid impairment to them or contamination from them during flooding.

E. Special Requirements for Mobile Homes.

(1) All mobile homes and any additions thereto shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties to ground anchors in accordance with the American National Standards Institute and National Fire Protection Association Standards as specified in the "Standard for the Installation of Mobile Homes Including Mobile Home Park Requirements" (NFPA No. 501A-1974 (ANSI A119.3-1975)) as amended for mobile homes in hurricane zones or other appropriate standards such as the following:

(a) Over-the-top ties shall be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations for units 50 feet or more in length, and one additional tie per side for units less than 50 feet in length.

(b) Frame ties shall be provided at each corner of the mobile home, with five additional ties per side at intermediate locations for units 50 feet or more in length, and four additional ties per side for units less than 50 feet in length.

(c) All components of the anchoring system shall be capable of carrying a force of 4800 pounds.

(2) All mobile homes and any additions thereto shall also be elevated in accordance with the following requirements:

(a) The stands or lots shall be elevated on compacted fill, or on pilings so that the lowest floor of the mobile home will be at or above the elevation of the regulatory flood.

(b) Adequate surface drainage is provided.

(c) Adequate access for a hauler is provided.

(d) Where pilings are used for elevation, the lots shall be large enough to permit steps; piling foundations shall be placed in stable soil no more than 10 feet apart; reinforcement shall be provided for pilings that will extend for 6 feet or more above the ground level.

(3) An evacuation plan indicating alternate vehicular access and escape routes shall be filed with the appropriate (Township, Borough, etc.) for mobile home parks and mobile home subdivisions where appropriate.

(4) No mobile homes shall be placed in any designated floodway area except in an existing mobile home park.

F. Flood-Prone Area Supplementary Administrative Provisions.

(1) A zoning permit shall be required prior to the undertaking of any development in any floodplain area.

(2) Prior to the issuance of any zoning permit the Zoning Officer shall review the application for permit to determine if all other necessary governmental permits such as those required by State and Federal laws have been obtained, including those required by Act 537, the Pennsylvania Sewage Facilities Act, Dam Safety and Encroachments Act, and the Federal Water Pollution Control Act Amendments of 1972, §404, 33 U.S.C. 1334. No permit shall be issued until this determination has been made.

(3) In addition to the application requirements found in §27-2203 of this Chapter, the applicant for zoning permit shall include the following:

(a) 100-year flood elevations.

(b) Proposed lowest floor elevations in relation to mean sea level, i.e., National Geodetic Vertical Datum of 1929.

(4) For structures to be floodproofed to the regulatory flood elevation, a document, certified by a registered professional engineer or architect, which states that the proposed construction has been adequately designed to

withstand the 100-year flood elevations, pressures, velocities, impact, and uplift forces and other hydrostatic, hydrodynamic and buoyancy factors associated with the 100-year flood. Such statement shall include a description of the type and extent of floodproofing measures which have been incorporated into the design of the structure.

(5) In granting any variance or special exception the Zoning Hearing Board shall employ the following criteria in addition to those required by §27-1901 through §27-1905 of this Chapter.

(a) No variance shall be granted for any construction, development, use or activity within any floodway area that would cause any increase in the 100-year flood elevation.

(b) Whenever a variance is granted, the Township 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.

G. Development Which May Endanger Human Life.

(1) The provisions of this subsection shall be applicable, in addition to any other applicable provisions of this Chapter, or any other ordinance, code, or regulation.

(2) 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:

(a) Will be used for the production or storage of any of the following dangerous materials or substances.

(b) 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.

(c) Will involve the production, storage, or use of any amount of radioactive substances.

(d) Shall be subject to the provisions of this subsection, in addition to all other applicable provisions. The following list of materials and substances are considered dangerous to human life:

- 1) Acetone.
- 2) Ammonia.
- 3) Benzene.
- 4) Calcium carbide.
- 5) Carbon disulfide.
- 6) Celluloid.
- 7) Chlorine.
- 8) Hydrochloric acid.

- 9) Hydrocyanic acid.
- 10) Magnesium.
- 11) Nitric acid and oxides of nitrogen.
- 12) Petroleum products (gasoline, fuel oil, etc.).
- 13) Phosphorus.
- 14) Potassium.
- 15) Sodium.
- 16) Sulphur and sulphur products.
- 17) Pesticides (including insecticides, fungicides and rodenticides).
- 18) Radioactive substances, insofar as such substances are not otherwise regulated.

(3) Within any Floodway District (FW) any structure of the kind described in subparagraph (2), above, shall be prohibited.

(4) Where permitted within any Flood-Fringe District (FF) or General Floodplain District (FA), any structure of the kind described in subparagraph (2), above, shall be:

(a) Elevated or designed and constructed to remain completely dry up to at least 1½ feet (the “freeboard requirement”) above 100-year flood.

(b) Designed to prevent pollution from the structure or activity during the course of a 100-year 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 flood-proofing contained in the publication “Flood-Proofing Regulations” (U.S. Army Corps of Engineers, June 1972), or with some other equivalent watertight standard.

(5) Except for a possible modification of the freeboard requirement involved, no variance shall be granted for any of the other requirements of this subsection .G.

H. *Activities Requiring Special Permits.*

(1) The provisions of this subsection shall be applicable, in addition to any other applicable provisions of this Chapter, or any other ordinance, code or regulation.

(2) *Identification of Activities Requiring a Special Permit.* In accordance with the Pennsylvania Flood Plain Management Act (Act 1978-166) and regulations adopted by the Department of Community and Economic Development as required by the Act, the following obstructions and activities are permitted only by special permit, if located partially or entirely within any Floodplain District:

(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 mobile home park or mobile home subdivision, or substantial improvement to an existing mobile home park or mobile home subdivision.

(3) *Applicable Requirements.* Applicants for special permits shall provide five copies of the following items:

(a) A written request including a completed building 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 1 inch being equal to 100 feet or less, showing the following:

- 1) North arrow, scale and date.
- 2) Topography based upon the National Geodetic Vertical Datum of 1929, showing existing and proposed contours at intervals of 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 accessways, 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 100-year flood elevations, and information concerning the flow of water including direction and velocities.
- 7) The location of all proposed buildings, structures, utilities, and any other improvements.
- 8) Any other information which the Township 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 100-year flood.

4) Detailed information concerning any proposed flood-proofing 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.

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 100-year 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 100-year 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 100-year flood elevations 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 100-year flood elevation and the effects such materials and debris may have on 100-year flood elevations 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 §302 of Act 1978-166.

9) An evacuation plan which fully explains the manner in which

the site will be safely evacuated before or during the course of a 100-year flood.

(4) *Application Review Procedures.* Upon receipt of an application for a special permit by the Township, the following procedures shall apply in addition to all other applicable permit procedures which are already established:

(a) Within 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 Township Planning Commission and Township Engineer for review and comment.

(b) If an application is received that is incomplete, the Township shall notify the applicant in writing, stating in what respects the application is deficient.

(c) If the Township decides to disapprove an application, it shall notify the applicant, in writing, of the reasons for the disapproval.

(d) If the Township 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 mail, within 5 working days after the date of approval.

(e) Before issuing the special permit, the Township shall allow the Department of Community and Economic Development 30 days, after receipt of the notification by the Department, to review the application and the decision made by the Township.

(f) If the Township does not receive any communication from the Department of Community and Economic Development during the 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 Township and the applicant, in writing, of the reasons for the disapproval, and the Township shall not issue the special permit.

(5) *Technical Requirements for Development Requiring a Special Permit.* In addition to any other applicable requirements, the following provisions shall also apply to the activities requiring a special permit. If there is any conflict between any of the following requirements and any otherwise applicable provision, the more restrictive provision shall apply.

(a) 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 100-year flood without any lateral movement or damage to either

the structure itself, or to any of its equipment or contents below the 100-year flood elevation.

b) The lowest floor elevation (including basement) will be at least 1½ feet (the “freeboard requirement”) above the 100-year 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 100-year flood.

2) Prevent any significant possibility of pollution, increased flood levels or flows, or debris endangering life and property.

3) 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 Township and the Department of Community and Economic Development.

(6) Except for a possible modification of the freeboard requirement involved, no variance shall be granted for any of the other requirements of this paragraph .G.

(Ord. 1-2004, 6/21/2004)

§17-103. Steep Slopes and Slide Hazard Areas.

No area having a slope in excess of 25% for 100 feet horizontal measured across the slope, nor any area identified by the U.S. Soil Conservation Service’s Soils Maps for Tioga County (unpublished data at present) as being slide prone shall be used for the construction of any building or structure except after approval as a special exception by the Zoning Hearing Board, subject to the requirements of this Chapter.

A. *Delineation.* Delineation of steep slope and slide hazard areas shall be the responsibility of the landowner, certified by a professional engineer, upon a general finding that said areas may exist on the site by the Zoning Officer.

B. If use of steep slope and slide hazard areas is requested, plans shall be prepared and presented which demonstrate appropriate design considerations to preclude any potential damage to the proposed use and which have been certified by a professional engineer.

(Ord. 1-2004, 6/21/2004)

